SAP Manufacturing Execution

How-To Guide

How To Set Up and Use the SAP ME Message Board Feature

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Document History

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1 Introduction

1.1 Purpose

The ME Help How-To-Guide for the Message Board feature is intended to provide sufficient information to enable the feature to be easily configured and readily utilized to meet business needs, making use of available best practices.

1.2 Scope

This Help information covers all aspects of the Message Board feature and its integration with other features and Activities previously related to Events, which are now referred to as Messages.

1.3 Glossary

Process Workflow (template)

A predefined set of steps used to achieve a desired outcome while processing a message. These are managed and maintained in Process Workflow maintenance and are applied to Message Types in Message Type Maintenance.

Real Time Message Display (RTMD)

Previously referred to as Real Time Event Display. This is a mechanism that is used at the POD level, an Icon that displays on the POD Selection Area Header, which is a visual indication to the users of a POD that messages exist that are of a nature that need to be processed immediately. Drop down in POD maintenance, with "ICON" or "NONE" values, enables or disables this feature in the POD.

Workflow Activities

These are the activities that define the individual Steps included in a Workflow template. These are unique activities (New Type defined specifically for this) that may be defined as "Manual" or "Automatic" and only apply to Process Workflows. Manual – means a manual user action is required to complete the step, while Automatic – means the system may complete the step due to some other action in the application taking place.

Auto Close on Process Workflow Completion

Checkbox in Message Type Maintenance, that when checked allows the system to automatically Close a Message when there are no other Process Workflow steps on the workflow of the message that need to be satisfied .

Use Auto Close Interval

Checkbox in Message Type Maintenance, that when checked allows the system to automatically Close a Message by the system in a certain time frame, days, hours or minutes, without any user action.

POD Notification

Checkbox in Message Type Maintenance, that when checked, will display this Message type in the Real Time Message display format and invoke the RTMD icon, that when clicked will display the list of all RTMD defined message types only. The icon that is displayed is Critical, Warning, or Info, based on the Severity defined on the Message type.

Message Types

What used to be defined as Event types has now been changed to be called Message Types. Essentially changing them to be processed as Messages in the Message Board.

FREE_FORM

This is the standard message type used to allow users to create messages on the fly.

2 Message Board Feature Overview

2.1 Description and Applicability

The Message Board feature allows you to create, withdraw, claim, unclaim, revoke, transfer, comment on, and close messages. It displays all messages generated by the system (action or activity being invoked) or by operators (messages of the FREE_FORM type). The Free Form messages can be generated on the fly and configured to be run in any POD using Create Message (see Create Message).

The Message Board can be configured as a standalone POD (launched from a desktop shortcut or from the Activity Manager), as a part of another POD (Message List is displayed in a fixed panel, popup or popover layout area), or as a list (Real-Time Message Display (RTMD) uses only Message List).

For more information, see Message List (Messages), Message Board Selection, and Real-Time Message Display.

The Message Board feature allows users to:

- Configure and define Message Types according to customers' needs

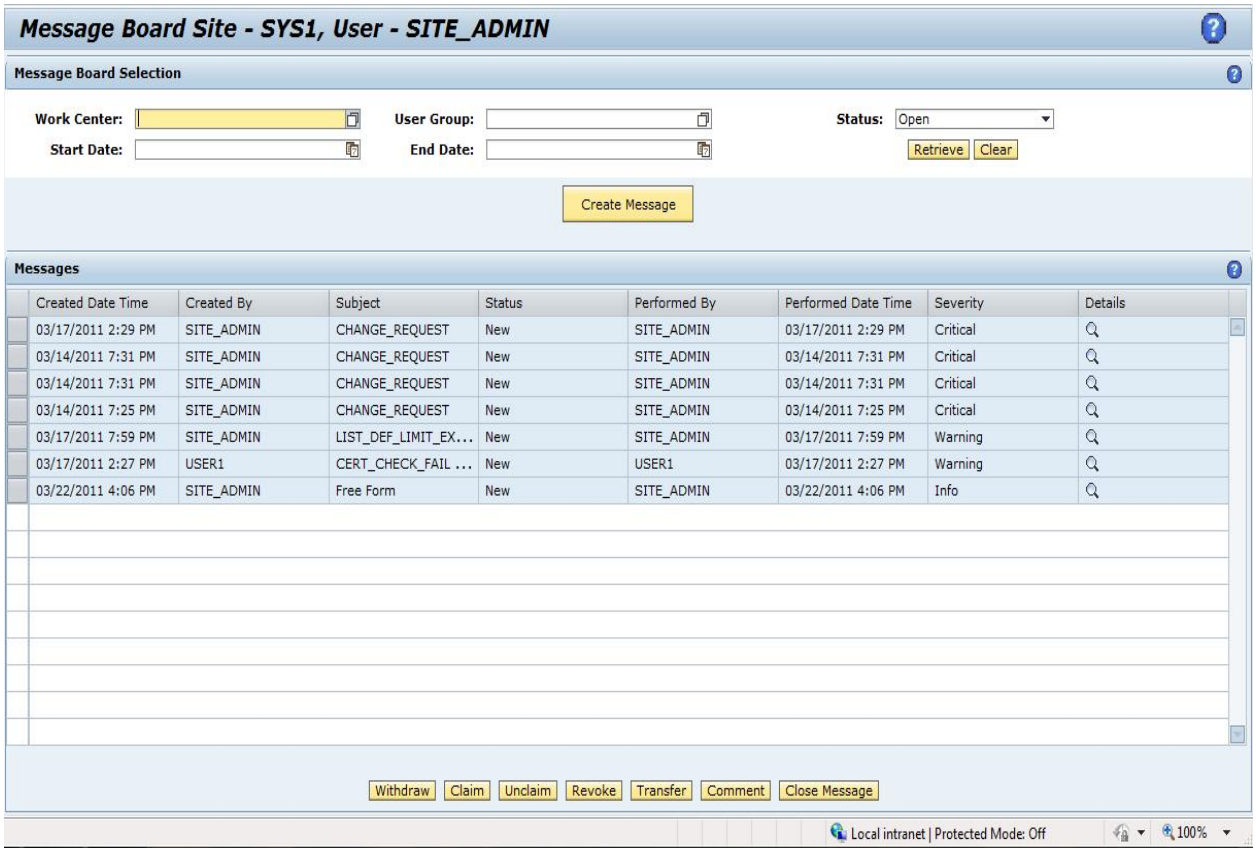
- Configure and define Process Workflows that can be assigned to Message Types and how those messages will be processed
- Identify specific specialized Activities which are used for Messages only
- Configure the Message Board POD standalone
- Configure the Message Board plug-in to be run in another POD (Operation or Work Center)
- Use the Message Board POD (filtering, searching, and processing of messages)
- Create Free form Messages
- View and process messages from Real Time Message Display

It can also send E-mail versions of the Message to designated e-mail accounts when the Message is generated

This feature provides access and interaction with the Message Board via the Message List. It enables operators to view messages that are directly related to the manufacturing process. It provides visual indicators when severe or critical messages appear requiring immediate attention. This feature allows operators to process messages and trace actions applied to the messages due to processing. It is a single location for viewing all messages. You can configure it to be run as its own POD, from any other POD, or as a real-time message list. You can generate Free Form messages on the fly, and configure them to be generated from any POD using the Create Message Activity (as a Button), and send them to any user group. You can configure message types and process workflows for message processing according to customers' needs.

It is important to note that we have migrated all of the previous Events that were in SAP ME 5.2 and translated those to unique Message Types. These Message Types have predefined and configured Process workflows and specialized Activities assigned already. Existing ME customers should have no problem in utilizing the new message Board functionality with these converted Events. They function similarly and the timing of the triggering of the message types has not really changed; only how they are managed and displayed has changed. We have mimicked the previous business cases and translated them into processing templates for these message types. They can be processed either by an End user or by the SAP ME system automatically.

Message Board – The figure below is an example of the Message Board default configuration.



2.2 Business Purposes / Functions

The purpose of the Message Board is to provide a Simple and convenient mechanism to view and process system generated and user generated messages. Typically, the messages have been generated due to manufacturing production scenarios being invoked. The Message Board is also a real time messaging system, meaning messages are sent as they are invoked, and are reflected in the Real Time Messaging Icon. This icon can be configured to be shown on a POD when messages are flagged as Critical or flagged to be shown through this mechanism.

The Message Board has been designed to send the messages out to User Groups, instead of to single individuals, for processing. This means that any user who belongs to the specified group can process the message and acknowledge the message's importance and requirement to do something to close it out. There are mechanisms in place so that messages cannot be processed by more than one person at a time, so as not to override any process completed by another person.

All of the core Events in Event Maintenance and the Event Send Client (in ME 5.2) and the messages that were generated to the Event Viewer have been migrated and mapped to the new Message Board functionality. There were effectively 28 core events that were mapped to create New Message types. There are also some brand new message types for other purposes.

Much of the existing triggering mechanisms for those events were maintained. A couple of triggering mechanisms were modified and enhanced to be able to process Messages with some unique action buttons and additional process flows. For Example, the existing RTW Consec NC, RTW Yield Rate, SPC Violation and SPC Warning events were translated to message types with specialized Process Workflows. These workflows can handle the unique nature of the processing of these types of messages. Not all new Message Types require complex processing; most are able to be processed either by the system or by a manual process to close the messages.

That is one of the major benefits of the New Message Board functionality…flexibility! Flexibility to process and acknowledge messages sent to your workforce in a simple or complex business scenario.
The Message Board also offers the ability for Users to create their own messages to be sent out to user groups in a few simple steps. These are called Free Form messages. These free form messages can be used as a tool for any user to immediately get a message out to their peers, on the fly. This is also a great tool for Supervisors, Managers, Line Managers and system administrators. They can quickly get a message out to people on the line to alert them of production issues, for general information purposes and the like. Free form Messages can be created from a POD, from the Real Time Message display, or from the Message Board.

The current core Message types have a Process Workflow. These are processed by a simple Workflow Engine. The Process Workflow is associated to the Message type and defines an exact path that the message needs to go through. This business process workflow can be used to acknowledge the message, provide some action to complete a step, and get the message to a closed state. The Process Workflow can be as simple or as complex as the customer needs to process a message through its lifecycle.

There are predefined templates created to handle all of the processing needs of the old events that were migrated from ME 5.2. It is important to note that many of the process workflow templates that already exist, have been created to support the processing for all of the Message types defined.

Another key benefit of the Message Board is the ability to also send an e-mail to any supported e-mail client. Therefore, when a message is generated to the Message Board, a corresponding e-mail is sent out, to say Microsoft Outlook, to the designated e-mail recipient (can be a single email address, group, or multiple). This adds another level of visibility to the messaging process by involving individuals and utilizing additional mechanisms to be sure the message is seen, read and transacted on in a timely manner. This is especially important when the message that is generated requires a user to perform some action to process that message, or to continue the production process.

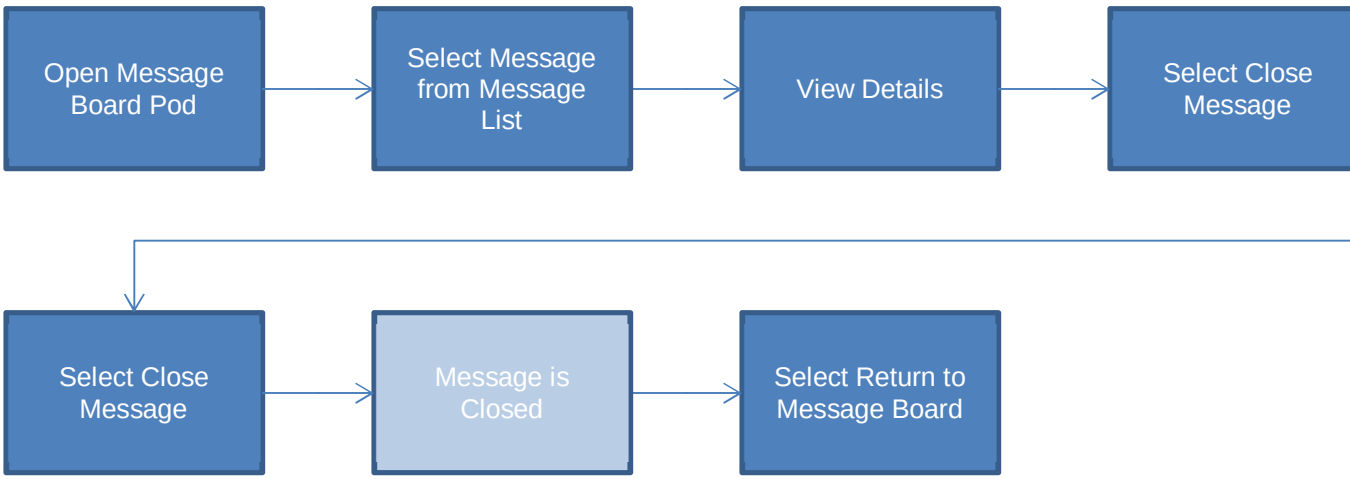
For instance, an SFC is completed at an operation, but it is required that a Buyoff is accepted or rejected to complete the operation. At the time the complete action is invoked, a Buyoff request message is sent out to the appropriate user group. It is required that the group acknowledges and accepts or rejects this buyoff to complete the transaction so the material may continue down the production line. In this case the Message is a catalyst to getting this action done quickly and informs the right group that something needs to happen to keep production rolling. This is just one small example of the power and benefit of the Message Board functionality.

The Message Board is intended to be used as an always-on solution, much the way any e-mail client is used in a business setting today or the way the ME Production PODs are used. It can be run as a Standalone POD, that a user may monitor throughout the day; or it may be configured to run in a POD frame, so it can be accessed while processing SFC's; or it can be initiated from the Real Time Message Icon, where critical messages are displayed in a unique way so they are managed quickly.

Also the Message Board POD provides additional filtering and search capabilities to allow users to quickly filter through the messages. This enables them to quickly find the messages they want to see, that need processing first etc. The message board is a great tool for keeping up with communications on the Production floor, so as to keep your production line moving forward productively and efficiently.

2.3 High-Level Process Flows

This figure illustrates the primary flow of user actions when utilizing Message Board to process a message generated through a Free Form message request, and to process it to completion.



2.4 Prerequisites

You have defined process workflows in *Process Workflow Maintenance* (see Process Workflow Maintenance).

You have defined message types in *Message Type Maintenance* (see Message Type Maintenance).

2.5 Best Practices

We recommend that the Message Board be used as an always-on solution, much like the way any e-mail client is used in a business setting today or the way our Production PODs are used. It can be run as a Standalone POD that a user may monitor throughout the day, or may be configured to run in a POD frame so it may be accessed while processing SFC's, or from the Real Time Message Icon where critical messages are displayed in a unique way, so they are managed quickly. Also the Message Board POD provides additional filtering and search capabilities to allow users to quickly filter through the messages they want to see, allowing them to quickly find the messages that need processing first etc. The message board is a great tool for keeping up with communications of the Production floor, so as to keep your production line moving forward productively and efficiently.

3 Message Board Functions

3.1 Message Board Selection (Filter Criteria)

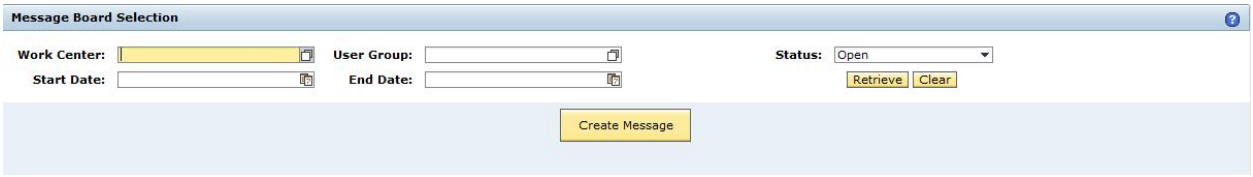
3.1.1 Description and Applicability

You use this activity to retrieve and display SAP ME messages on the Messages List (see *Message List (Messages)*). The fields in this area allow a User to filter the Message List to show only the Messages they want to see. This allows a User to quickly weed out Messages that are not of interest at that particular moment. When the Message Board is first launched, it automatically filters messages in the list, to those in an OPEN State (all Messages that are not completed, closed, revoked, or withdrawn). It also sorts the Message List to display Messages with Severity defined as Critical first, then Warning and lastly Info. The user may update the fields to filter the Messages to the criteria entered. The Message Board Selection Area is set up by default with the fields and default values defined below.

Note of Caution:
Any changes to the MESSAGE_BOARD_PANEL activity in *Activity Maintenance* may result in incorrect display of fields in the *Message Board Selection* area of the *Message Board* PODs.

For more information, see *Message Board POD*.

Message Board Selection Area



The following table identifies and describes the filter fields and their default values. If the filter field value is not blank, the metadata for a message must contain the filter field value (or fall within the date range) in order for the message to be displayed in the list of messages.

Filter Field	Description
Work Center	A single Work Center used to filter the messages. Default is blank.
User Group	A single User Group used to filter the messages. Default is blank. This is a user group to which the message has been sent.
Status	A single message Status used to filter the messages. Default is Open. See the following table for the Status filter values and definitions.
Start Date	Start date for a date range (inclusive) within which the message creation date must occur. Default is blank.
End Date	End date for a date range (inclusive) within which the message creation date must occur. Default is blank.

The following table identifies and describes the message Status filter values.

Status	Description
All	All existing messages regardless of their status.
Claimed	Message is in process and has been claimed by a user. It can only be processed by the user who has claimed it.
Closed	The message and any associated task have been closed.
In Queue	The message was claimed by a user and was then unclaimed by that user. It can now be processed by some other user.
New	The message has not had any action performed on it.
Open	The message does not have a status of Closed, Revoked, or Withdrawn.
Revoked	The message has been closed because the user who claimed it could not perform the associated task.
Withdrawn	The message is closed because the user who created it has withdrawn it.

When any of the previous filter criteria have been entered, the Message List will display only the messages that pass all of the entered filter criteria. All criteria will be “ANDED” together. Below are examples of entered criteria and expected results:

- The user selects a User Group "Operator" for example and selects the Retrieve button; the system responds by refreshing and displaying the list of Messages assigned to the Operator Group and in the OPEN status (this is the default Status).

- The user selects a Status of "Revoked" and selects the Retrieve button; the Message Board displays the list of Messages assigned to the Operator Group with a Status of Revoked.

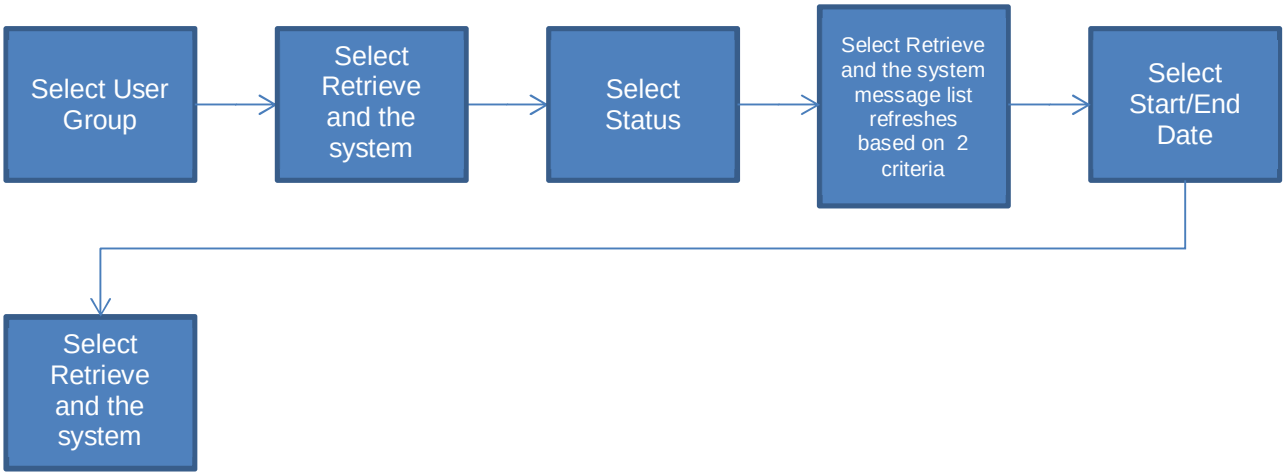
- The user selects a date range by selecting a date from the calendar component in the Start Date and End Date fields; the Message Board displays the list of Messages assigned to the Operator Group with a Status of Revoked and created within the date range specified (including the dates specified).

3.1.2 Purpose / Effects

The Message Board POD has been optimized with regard to its layout. The Layout consists of the Message Board Selection area (panel) and the Message Board List. The Selection area is non-configurable in POD Maintenance and contains filters for searching the list of Messages, including Work Center, User Group, Status, Start Date and End Date. These filters allow the User to narrow the list of messages to only those they want to see.

3.1.3 Process Flow

This figure illustrates the primary flow of user and system actions to display the Message List when Filter Criteria is entered.


Select User Group
Select Retrieve and the system
Select Status
Select Retrieve and the system message list refreshes based on 2 criteria
Select Start/End Date
Select Retrieve and the system

3.1.4 Data Model

3.1.5 Function Specific Setup

For setting up this function, see Pod Maintenance and Setting Up Message Board PODs. If changes are made to the default MESSAGE_BOARD, MESSAGE_BOARD_LIST and

MESSAGE_BOARD_PANEL Activities in Activity Maintenance, this could cause the Message Board POD to not work correctly as it has been optimized for ME at this stage.

3.1.6 Best Practices

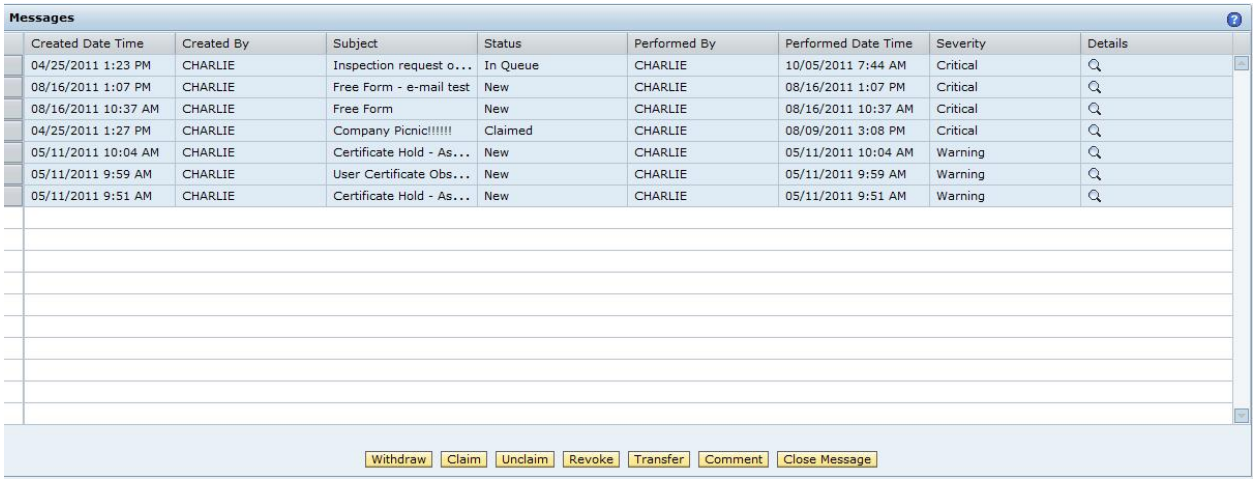
We recommend that you use Message Board POD in its default POD Configuration or as it is configured for use with Real Time Message display.

3.2 Message Board List

3.2.1 Description and Applicability

The Messages List displays the information in the following table for each message that meets the selection criteria, as discussed above.

Message Board List


Messages
Created Date Time
Created By
Subject
Status
Performed By
Performed Date Time
Severity
Details
04/25/2011 1:23 PM CHARLIE Inspection request o... In Queue CHARLIE 10/05/2011 7:44 AM Critical
08/16/2011 1:07 PM CHARLIE Free Form - e-mail test New CHARLIE 08/16/2011 1:07 PM Critical
08/16/2011 10:37 AM CHARLIE Free Form New CHARLIE 08/16/2011 10:37 AM Critical
04/25/2011 1:27 PM CHARLIE Company Picnic!!!!!! Claimed CHARLIE 08/09/2011 3:08 PM Critical
05/11/2011 10:04 AM CHARLIE Certificate Hold - As... New CHARLIE 05/11/2011 10:04 AM Warning
05/11/2011 9:59 AM CHARLIE User Certificate Obs... New CHARLIE 05/11/2011 9:59 AM Warning
05/11/2011 9:51 AM CHARLIE Certificate Hold - As... New CHARLIE 05/11/2011 9:51 AM Warning
Withdraw
Claim
Unclaim
Revoke
Transfer
Comment
Close Message

Column Name	Description
Created Date Time	The date and time when the message was created
Created By	The user ID of the user who created the message
Subject	The message subject as entered by the user, or the system
Status	The current status of the message
Performed By	The user ID of the user who took the most recent action on the message
Performed Date Time	The date and time when the last action was taken on the message
Severity	The severity level of the message
Details	An icon that provides access to the details for the message

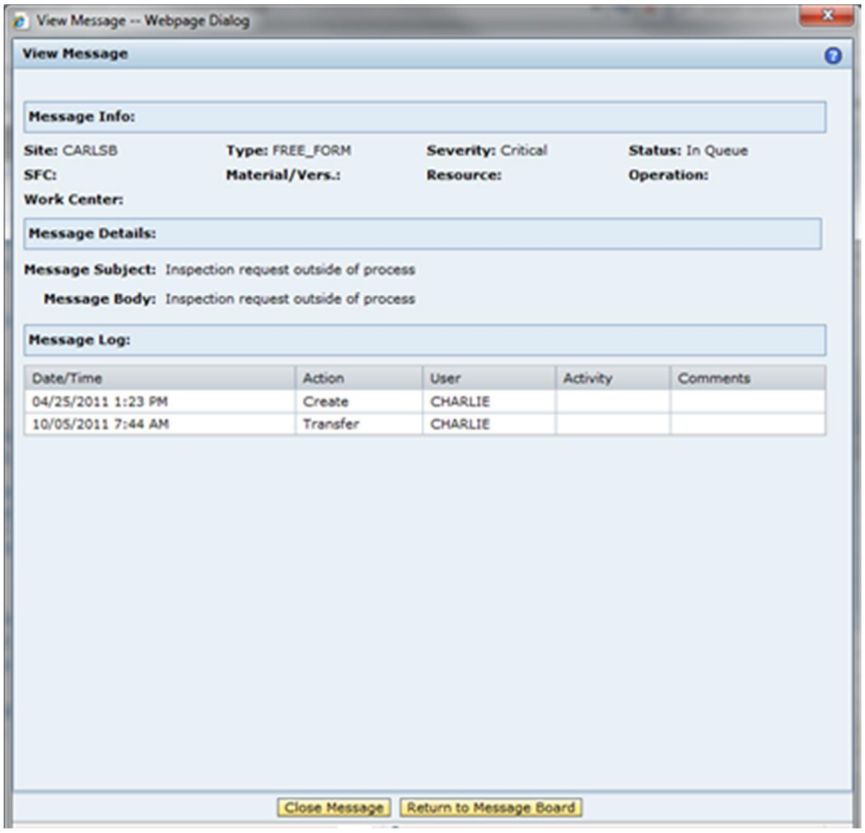
The List of Messages is handled by the Activity called MESSAGE_BOARD_LIST. The Columns have been predefined and are not configurable. The Details icon in the last column opens the View Message dialog.

This dialog is used to view the entire Message details, including the metadata related to the message generation, as well as the Subject and Message Body. The Message Log

area shows all of the user transactions that have taken place against the message. All actions that happen to a message are tracked and logged. This offers a visual time line of the processing lifecycle of the Message.

The View Message dialog and the Messages List plug-in also provide action buttons. These buttons are dynamic, based on the Message type and status, the workflow assigned and the rules defined for the individual Process Workflow activities. The buttons determine what manual actions a User may take to process the Message

Message Board View Message (Details) Dialog (Free Form Message example)



3.2.2 Purpose / Effects

The Message Board offers several ways to process a message:

- Using the Action Buttons in the Messages List plug-in
- Using the Action Buttons in the View Message dialog
- Actions based on the Process Workflow activities associated to the Message Type being processed

Each action button, that changes the status of a message, displays a Comments dialog so the user can enter a reason for taking the action on the message. Entering a comment is not

required. The Comments dialog restates the action as a button on the dialog. These buttons function as a confirmation that the user truly wants to perform this action. For example, the User selected Claim, so on the Claim comments dialog there is a Claim button that is the confirmation that they want to perform the Claim action.

For each action, the action and the comments are logged to the Message Log and can be viewed on the View Message dialog. This gives a history as to how the Message was processed. The Message Log contains the action, the date and time of the action and who performed it. When an action is taken, an informational message is displayed at the top of the Message List plug-in indicating the action that was taken.

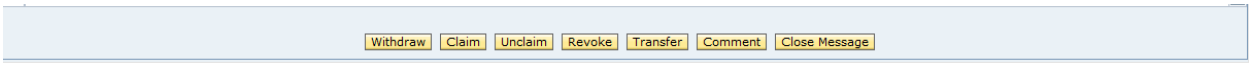
Each Message type processes differently based on the Message Type and the Process Workflow template assigned. The View Message dialog buttons change dynamically based on the process steps defined. For example, the message Types for Buyoff requests and RTW and SPC type Messages have buttons on the View Message dialog for Accept and Reject and Log Codes respectively.

As another example, there may only be buttons for Close Message and Return To Message Board displayed in the View Message dialog. The Close Message action posts the Close Message Comments dialog. The user enters the desired comments and clicks the Close Message button on the dialog. This logs the comments and the action to the Message Log and closes the Message, since all of the steps of the Process workflow for this message type have been completed. The status of the Message goes to Closed. If the Message list is filtered by the OPEN status, the message is no longer displayed in the Message list. It can be displayed in the list by Filtering on the status field for the "CLOSED" or "ALL" status.

This is the general concept of using the Message Board, the actions from the Message List and the Actions from the View Details dialog. This same strategy is used for the processing of all Message types within the Message Board POD.

Deviations from this flow occur when messages are Withdrawn, Revoked, or transferred, as described previously.

Message Board Action Buttons located at the bottom of the Message List



Actions which can be taken directly in the Message List plug-in include:

- Withdraw
- Claim
- Unclaim

- Revoke
- Transfer
- Comment
- Close Message

Withdraw - Changes the message status to Withdrawn and effectively closes the message. Withdraw can only be done by the creator of the Message. This is used when a message was created in error and is no longer needed.

Claim – Changes the message status to Claimed. Claim is a very important action. It is used to put a lock on a Message, when that Message is to be processed by an end user. This lock prevents any other user from performing any action on the Message. So concurrency issues are avoided and it provides a visual indication to other Users in the User Group that this message is being worked.

Note: We highly recommended that any user who wishes to work on processing a Message to Claim the message first.

Unclaim - The status of the message changes to Inqueue, meaning processing has begun on this Message. Unclaim is essentially the reverse of Claim, removing the claim lock so any other user can work on or Process the message.

Revoke - Changes the Status of the Message to REVOKED and effectively closes the Message, no further processing can be done. Revoke is used when the Message is not needed or where the message cannot be processed to completion.

Transfer – Sets the status of the message to Inqueue. This action is used to transfer the message to a different User Group in the event that the original User Groups assigned cannot process the message or it was sent to the wrong group initially. When the Transfer action is complete, the Message will be removed from the original User Group and will show up on the destination User Group's List of Messages.

Comment – Does not change the status of the Message. This action is used to log comments against the message. This action allows users to add comments, for specific users or for the User Group processing the message, as additional information for processing of the message.

Close Message – Changes the status of the message to Closed. This action may be used when a Message can be closed directly from the Message Board, with no Actions required from the View Message Details dialog. This is particularly effective for simple message types like the Free Form where there is no Process Workflow defined and the user can simply

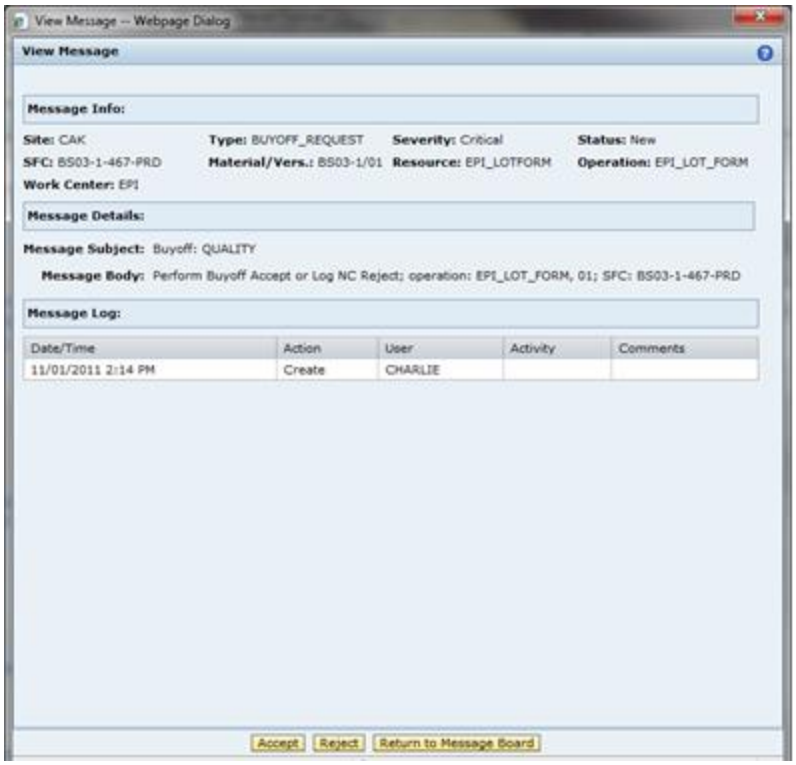
close the message after it has been viewed. It is applicable where a Manual close is needed to close a Message to acknowledge receipt and viewing of the Message.

Processing from the Details dialog – Different Message Types require different types of processing and from the Details dialog it may be possible to perform additional processing actions. These are based on 1) the Message Type, 2) Process Workflow assigned, and the 3) Process Workflow Activities assigned to the Workflow. These differences will affect how the Details dialog looks and behaves. There are several core out-of-the-box Message Types that have been optimized to support specific business process flows. They have been created to support how the previous EVENTS and EVENT TYPES were processed. These include:

- BUYOFF_WF
- FREE_FORM
- RTW_CONSEC_NC
- RTW_YIELD_RATE
- SPC_ALARM_VIOLATION
- SPC_ALARM_WARNING

BUYOFF_WF – The process workflow is configured to allow two Manual steps (Accept and reject) in the processing of a Buyoff Message. These show up on the Message Details dialog as buttons for Accept and Reject. Both actions invoke a dialog where a user will be required to enter data to proceed. This is an EITHER/OR Process workflow, meaning that the user either selects the Accept button or the Reject button. Accept just closes the message. Reject posts the LOGNC_REJECT dialog to log an NC due to a reject and, once the NC is logged, the Message closes.

Message Board Buyoff Request (Details view)

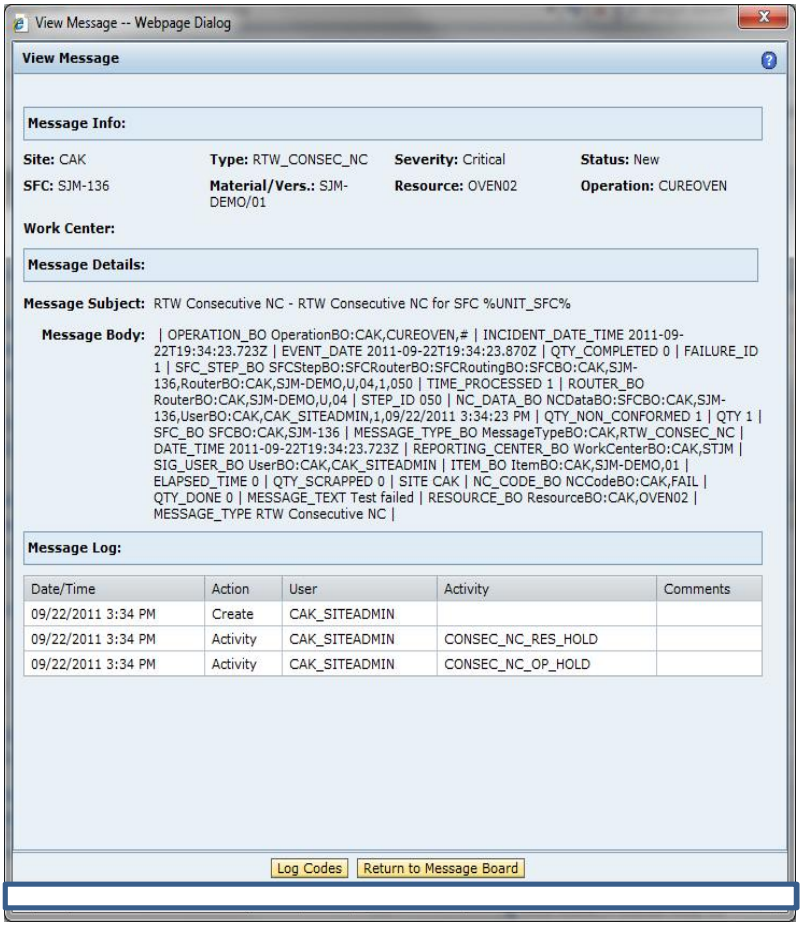


RTW_CONSEC_NC, RTW_YIELD_RATE, SPC_ALARM_VIOLATION and SPC_ALARM_WARNING – The process workflow consists of 5 Sequence steps that will need to be completed before the Message can be closed. The First 2 steps are Automatic steps that are invoked as soon as the Message is generated and place a Hold on the Operation and Resource due to Consecutive NC threshold violations or Yield Rate being reached or SPC Violation or Warning has been met. This means the Operation and Resource cannot move forward until the Message is processed.

The third step is an Action that a User must take manually. This step corresponds to the LOG CODES button on the Details dialog for the RTW_CONSEC_NC type message. The user must invoke the action, which opens the Log Codes dialog, where the user will have to enter Reason, Cause and Resolution information and complete the Log Codes action to complete the Step. Once this step is completed, the next two steps on the Message will be invoked.

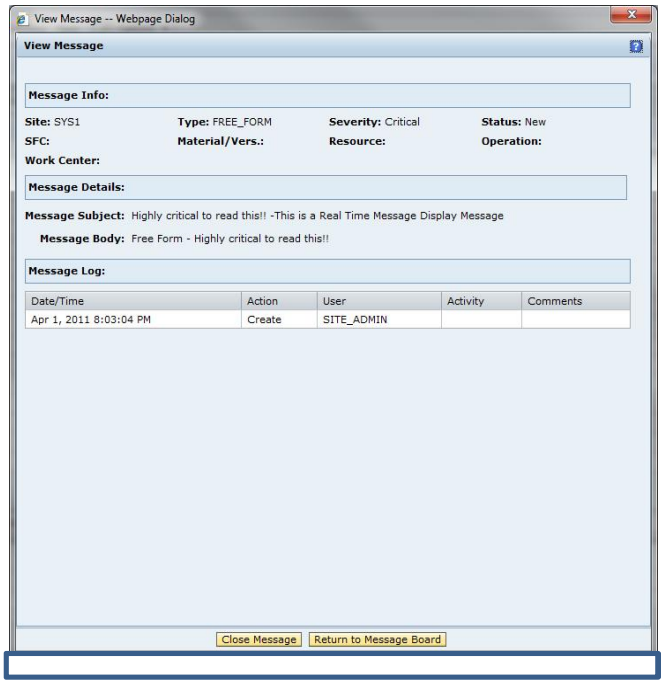
These are automatic steps, where the system releases the HOLD on the Operation and Resource automatically. Once that is done, the steps are completed by the system and since no other Process Workflow steps exist after that, the Message goes to a Closed state.

Message Board RTW_CONSEC_NC (Details view)


View Message -- Webpage Dialog
View Message
Message Info:
Site: CAK
Type: RTW_CONSEC_NC
Severity: Critical
Status: New
SFC: SJM-136
Material/Vers.: SJM-DEMO/01
Resource: OVEN02
Operation: CUREOVEN
Work Center:
Message Details:
Message Subject: RTW Consecutive NC - RTW Consecutive NC for SFC %UNIT_SFC%
Message Body: | OPERATION_BO OperationBO:CAK,CUREOVEN,# | INCIDENT_DATE_TIME 2011-09-22T19:34:23.723Z | EVENT_DATE 2011-09-22T19:34:23.870Z | QTY_COMPLETED 0 | FAILURE_ID 1 | SFC_STEP_BO SFCStepBO:SFCRouterBO:SFCRoutingBO:SFCBO:CAK,SJM-136,RouterBO:CAK,SJM-DEMO,U,04,1,050 | TIME_PROCESSED 1 | ROUTER_BO RouterBO:CAK,SJM-DEMO,U,04 | STEP_ID 050 | NC_DATA_BO NCDataBO:SFCBO:CAK,SJM-136,UserBO:CAK,CAK_SITEADMIN,1,09/22/2011 3:34:23 PM | QTY_NON_CONFORMED 1 | QTY 1 | SFC_BO SFCBO:CAK,SJM-136 | MESSAGE_TYPE_BO MessageTypeBO:CAK,RTW_CONSEC_NC | DATE_TIME 2011-09-22T19:34:23.723Z | REPORTING_CENTER_BO WorkCenterBO:CAK,STJM | SIG_USER_BO UserBO:CAK,CAK_SITEADMIN | ITEM_BO ItemBO:CAK,SJM-DEMO,01 | ELAPSED_TIME 0 | QTY_SCRAPPED 0 | SITE CAK | NC_CODE_BO NCCodeBO:CAK,FAIL | QTY_DONE 0 | MESSAGE_TEXT Test failed | RESOURCE_BO ResourceBO:CAK,OVEN02 | MESSAGE_TYPE RTW Consecutive NC |
Message Log:
Date/Time
Action
User
Activity
Comments
09/22/2011 3:34 PM
Create
CAK_SITEADMIN
09/22/2011 3:34 PM
Activity
CAK_SITEADMIN
CONSEC_NC_RES_HOLD
09/22/2011 3:34 PM
Activity
CAK_SITEADMIN
CONSEC_NC_OP_HOLD
Log Codes
Return to Message Board

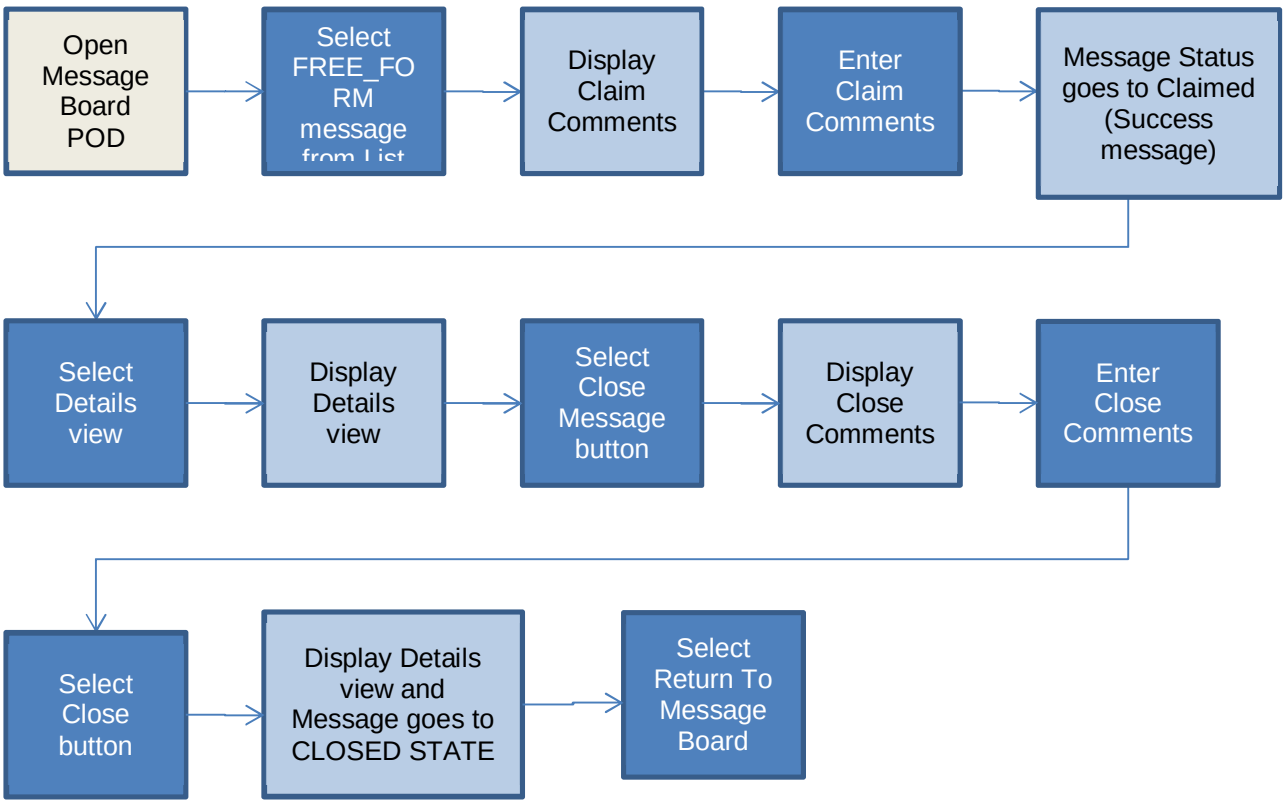
FREE_FORM and all other types – The SIMPLE process workflow is used for ALL OTHER Message types that exist in the system (previously defined EVENTS that were migrated to Message Types) not identified above. This process workflow has no automatic or manual sequence steps, so this means that it may or may not need a manual "Close Message" action to be invoked by a user to close the message. A Message type with this Process workflow assigned can be Closed by a User Clicking on the Close Message button in the Message Board POD, by the system if the Auto Close Interval or Auto Close On Process Workflow Completion, check boxes are checked. This Process Workflow has been assigned to the FREE_FORM Message type as its standard.

Message Board Details example for FREE_FORM. Notice the Close and Return to Message Board buttons at the bottom.

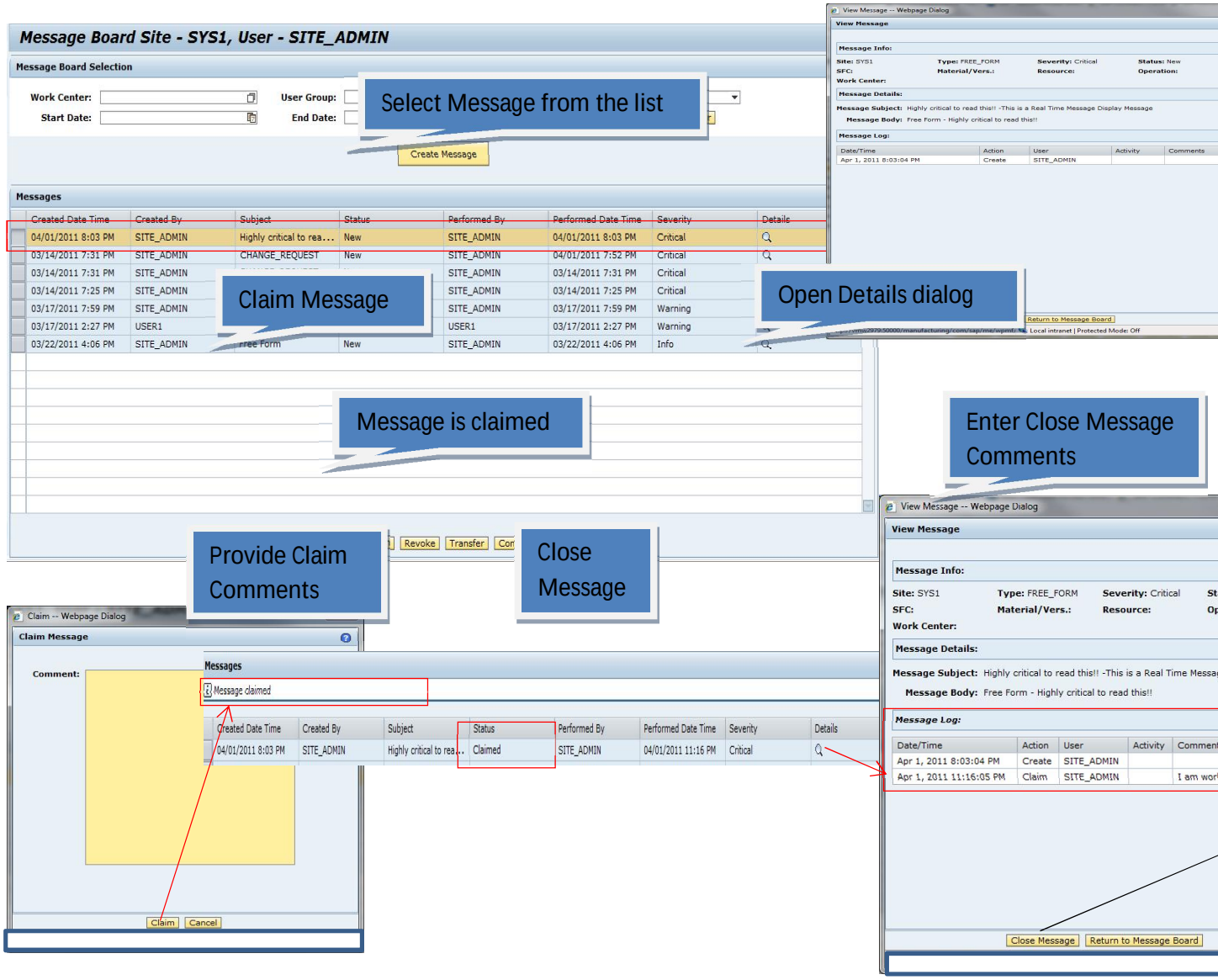


3.2.3 Process Flow

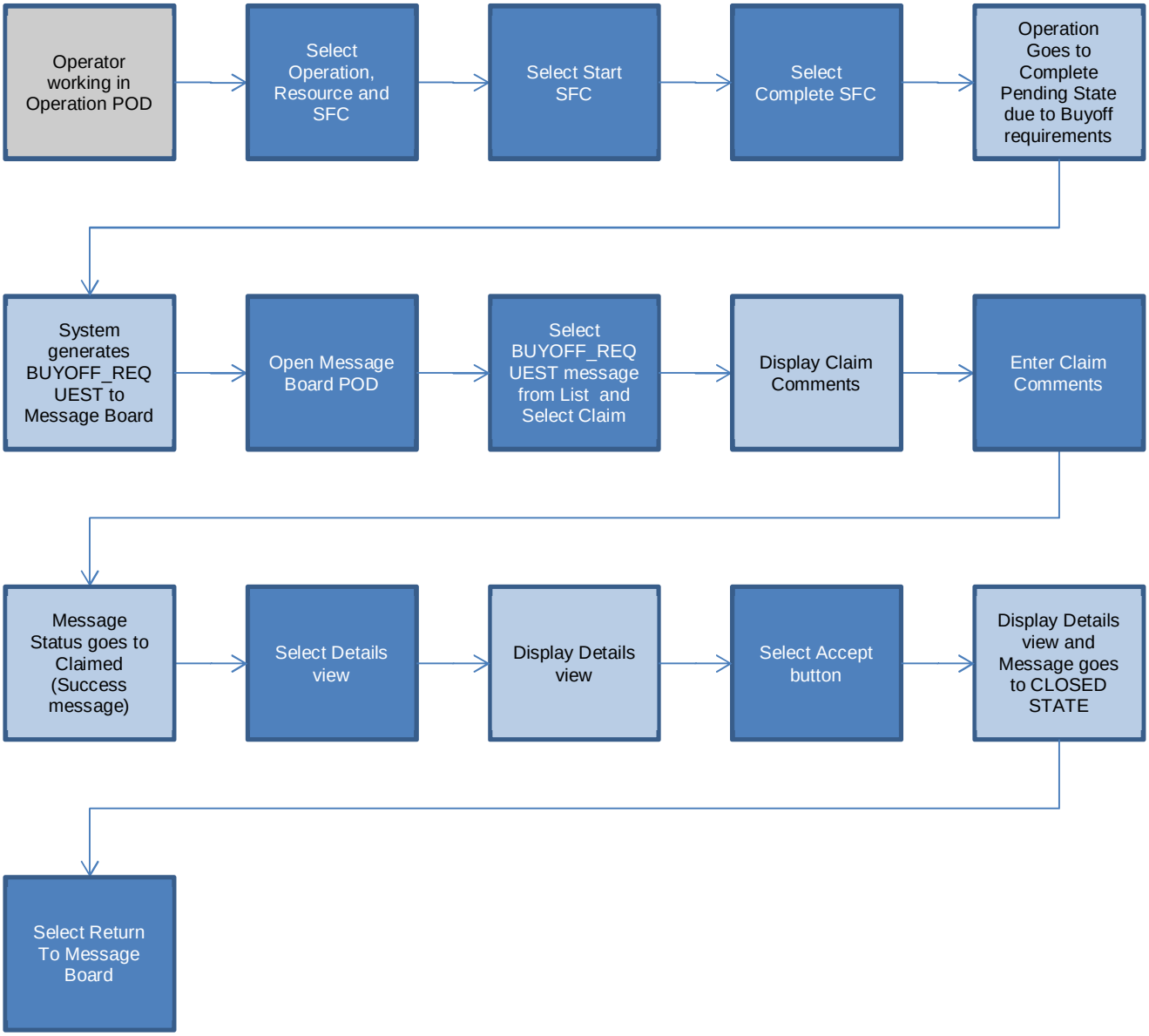
This figure illustrates the primary flow of user and system actions to process a FREE_FORM Message (or any Message Type with the SIMPLE Process Workflow assigned).


Open Message Board POD
Select FREE_FORM message from List
Display Claim Comments
Enter Claim Comments
Message Status goes to Claimed (Success message)
Select Details view
Display Details view
Select Close Message button
Display Close Comments
Enter Close Comments
Select Close button
Display Details view and Message goes to CLOSED STATE
Select Return To Message Board

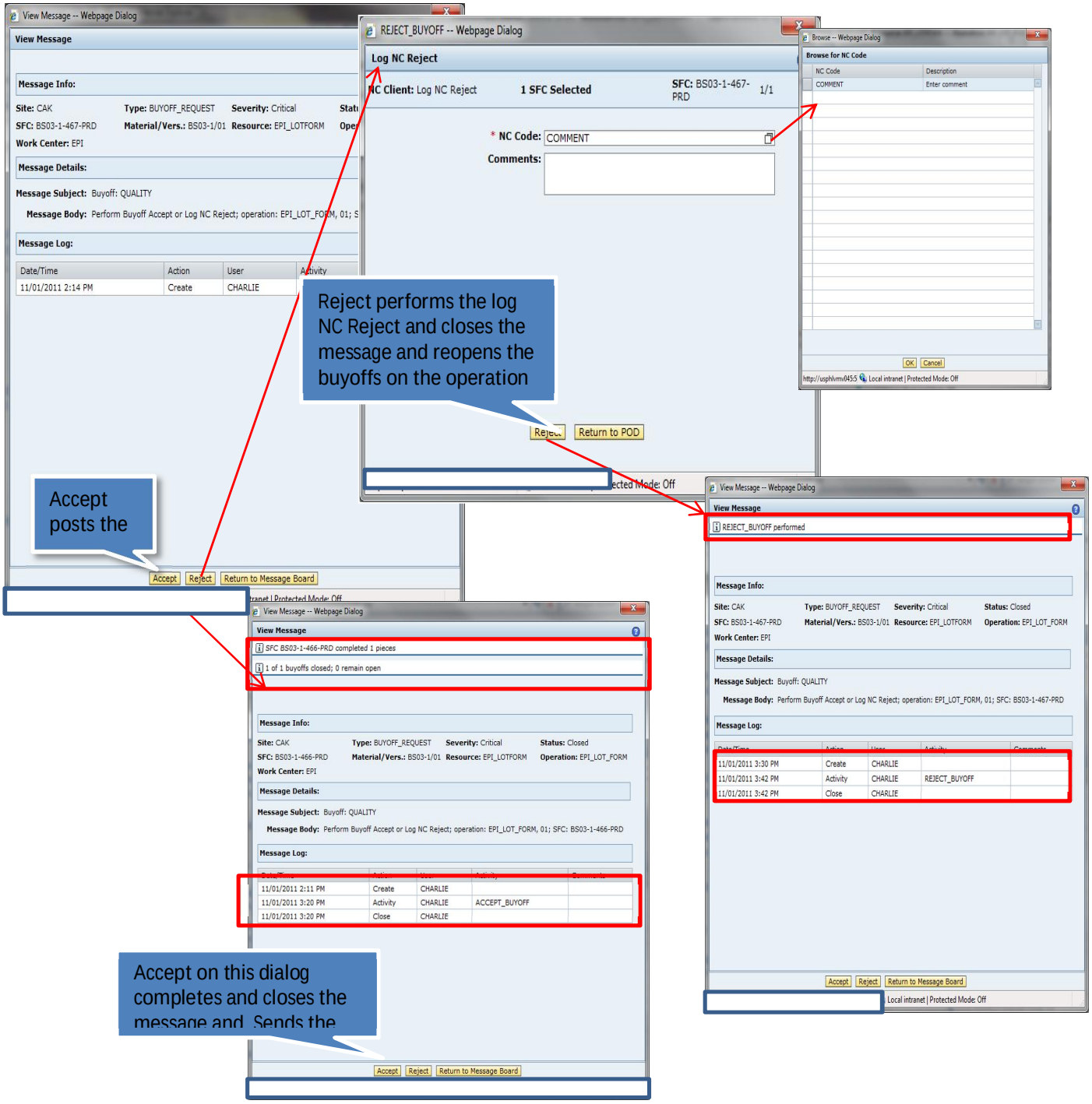
Free Form Message Processing – Screen Shots



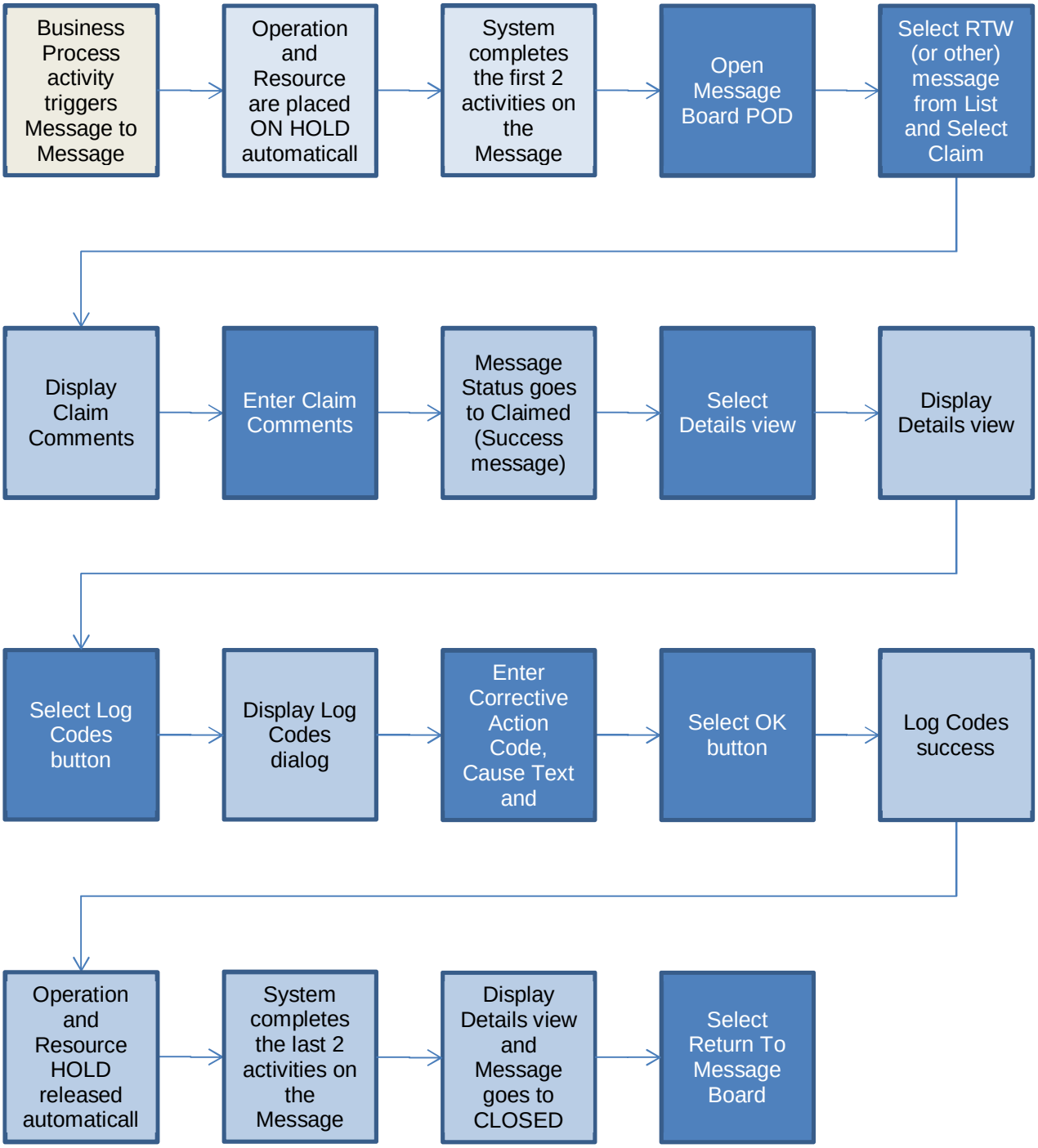
Process Flow – This figure illustrates the primary flow of user and system actions to process a BUYOFF_REQUEST message.


Operator working in Operation POD
Select Operation, Resource and SFC
Select Start SFC
Select Complete SFC
Operation Goes to Complete Pending State due to Buyoff requirements
System generates BUYOFF_REQUEST to Message Board
Open Message Board POD
Select BUYOFF_REQUEST message from List and Select Claim
Display Claim Comments
Enter Claim Comments
Message Status goes to Claimed (Success message)
Select Details view
Display Details view
Select Accept button
Display Details view and Message goes to CLOSED STATE
Select Return To Message Board

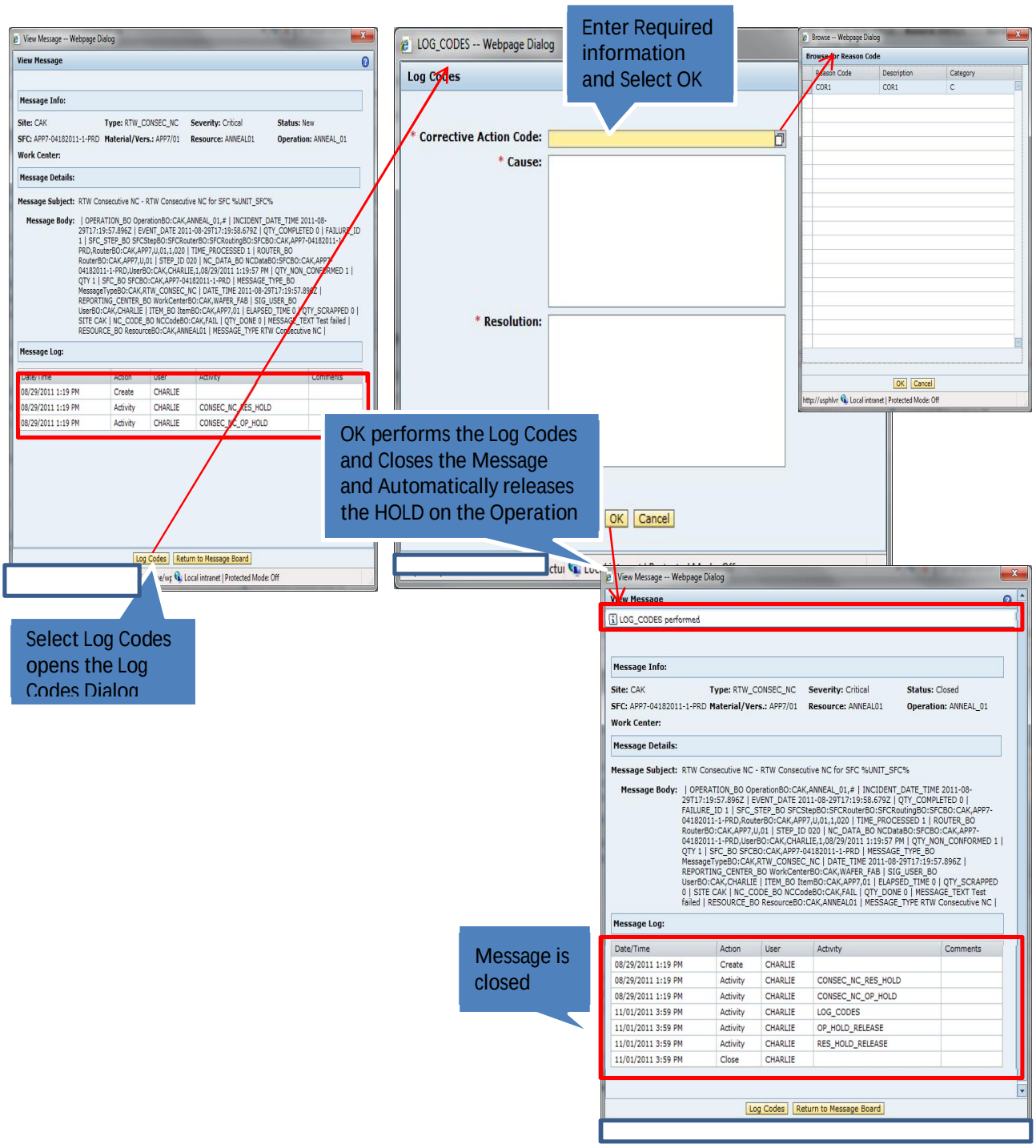
Message Board Buyoff Request screen flow.



Process Flow – This figure illustrates the primary flow of user and system actions to process a RTW_CONSEC_NC, RTW_YIELD_RATE, SPC_ALARM_VIOLATION and SPC_ALARM_WARNING.


Business Process activity triggers Message to Message
Operation and Resource are placed ON HOLD automaticall
System completes the first 2 activities on the Message
Open Message Board POD
Select RTW (or other) message from List and Select Claim
Display Claim Comments
Enter Claim Comments
Message Status goes to Claimed (Success message)
Select Details view
Display Details view
Select Log Codes button
Display Log Codes dialog
Enter Corrective Action Code, Cause Text and
Select OK button
Log Codes success
Operation and Resource HOLD released automaticall
System completes the last 2 activities on the Message
Display Details view and Message goes to CLOSED
Select Return To Message Board

Message Board RTW and SPC screen flows


Enter Required information and Select OK
OK performs the Log Codes and Closes the Message and Automatically releases the HOLD on the Operation
Select Log Codes opens the Log Codes Dialog
Message is closed
View Message -- Webpage Dialog
LOG_CODES -- Webpage Dialog
Browse -- Webpage Dialog
Corrective Action Code:
Cause:
Resolution:
OK
Cancel
Log Codes
Return to Message Board
LOG_CODES performed

3.2.4 Function Specific Setup

For setting up this function, see Pod Maintenance and Setting Up Message Board PODs. If changes are made to the default MESSAGE_BOARD, MESSAGE_BOARD_LIST and

MESSAGE_BOARD_PANEL Activities in Activity Maintenance, this could cause the Message Board POD to not work correctly as it has been optimized for ME at this stage.

3.2.5 Best Practices

The Message Types, Process Workflows and Process Workflow Activities have been optimized to support previously existing EVENT TYPES and processing and to fit into the Message Board functionality. We recommend that if any of the Message types need to be configured for a customer, the customer should work with an SAP representative to accomplish this. Configuration may be to define new process workflow activities needed for custom processes and to create new Process Workflow to support specific needs and to work with the Message Board effectively. FREE_FORM Message Types have been created to allow Users to create messages that may be sent to user group's on-the-fly to allow for real time communication. Some custom configuration may be done by the customer on the existing core Message Types as defined in *Message Type Maintenance, Process Workflow Maintenance,* and *Activity Maintenance*.

3.3 Create Free Form Message

3.3.1 Description and Applicability

Provides the capability for a user to Create on demand or real time messages to the user community by using the Create Message button. Additional flexibility provided by the Free form Message Type includes:

- Creation of messages that may be sent to one or many User Groups on the fly (like an e-mail system).
- Can be configured to have a simple (basic) or complex workflow, as defined by the customer.
- Can have a severity level set that will identify the Message as Critical, Warning, or Info. This helps to identify the criticality of the message so that users know of its importance.
- Can be configured so messages have default text associated with them.
- Can be configured so a copy of the message is sent to e-mail addresses.
- Is configured as an out of the box message type.

3.3.2 Purpose / Effects -Create Free Form Message (Plug-in)

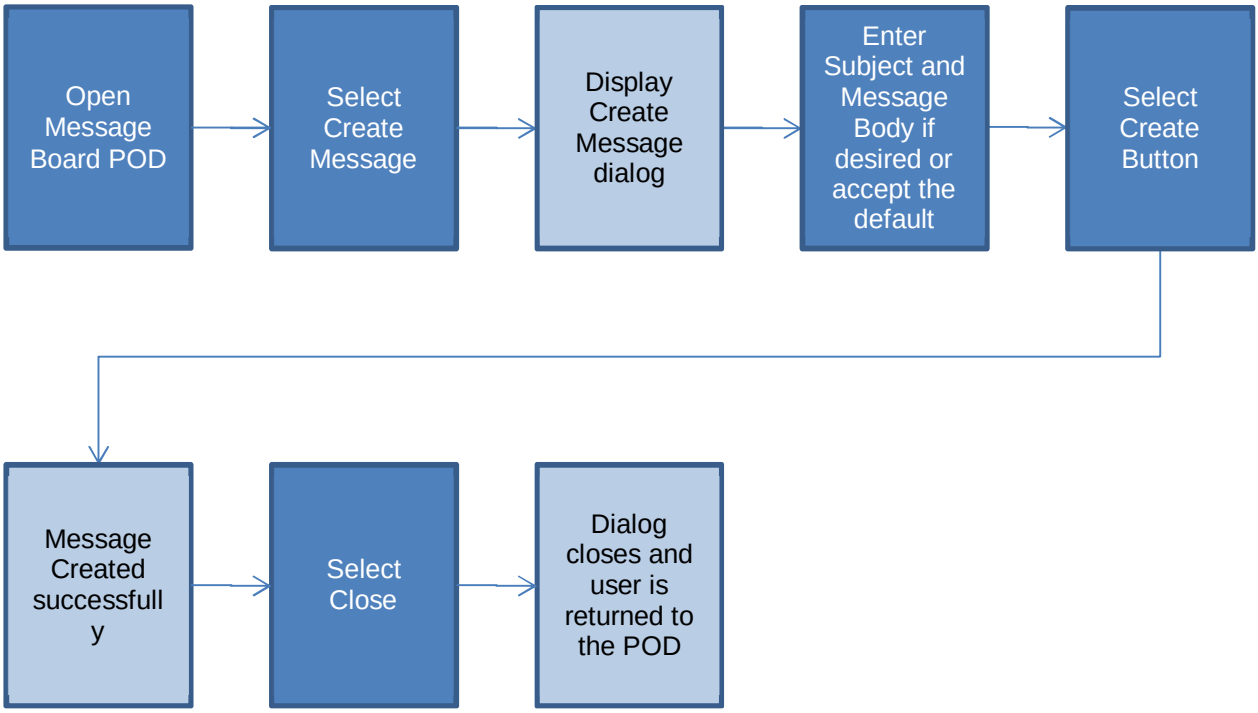
The ability to create Messages on the fly can be accomplished using the Create Message activity from a POD or from the Message Board itself. The Create Message plug-in can be configured to be run from a Button in a POD, in an Activity Group or as a button on the Message Board. When invoked, the Create Message dialog is displayed, where the User may modify the predefined Subject and Message Body text or append to it to formulate the desired message.

The only types of messages that can be created from the Create Message dialog are FREE_FORM type messages. Configuration of the message type is accomplished in *Message Type Maintenance*. Message Type, Severity and User Group are non-editable in the dialog, as this is the configuration defined for this type in *Message Type Maintenance*. It is displayed for informational purposes only. When the Message is created that information, as well as any information entered manually in the Subject and Message Body fields will be included.

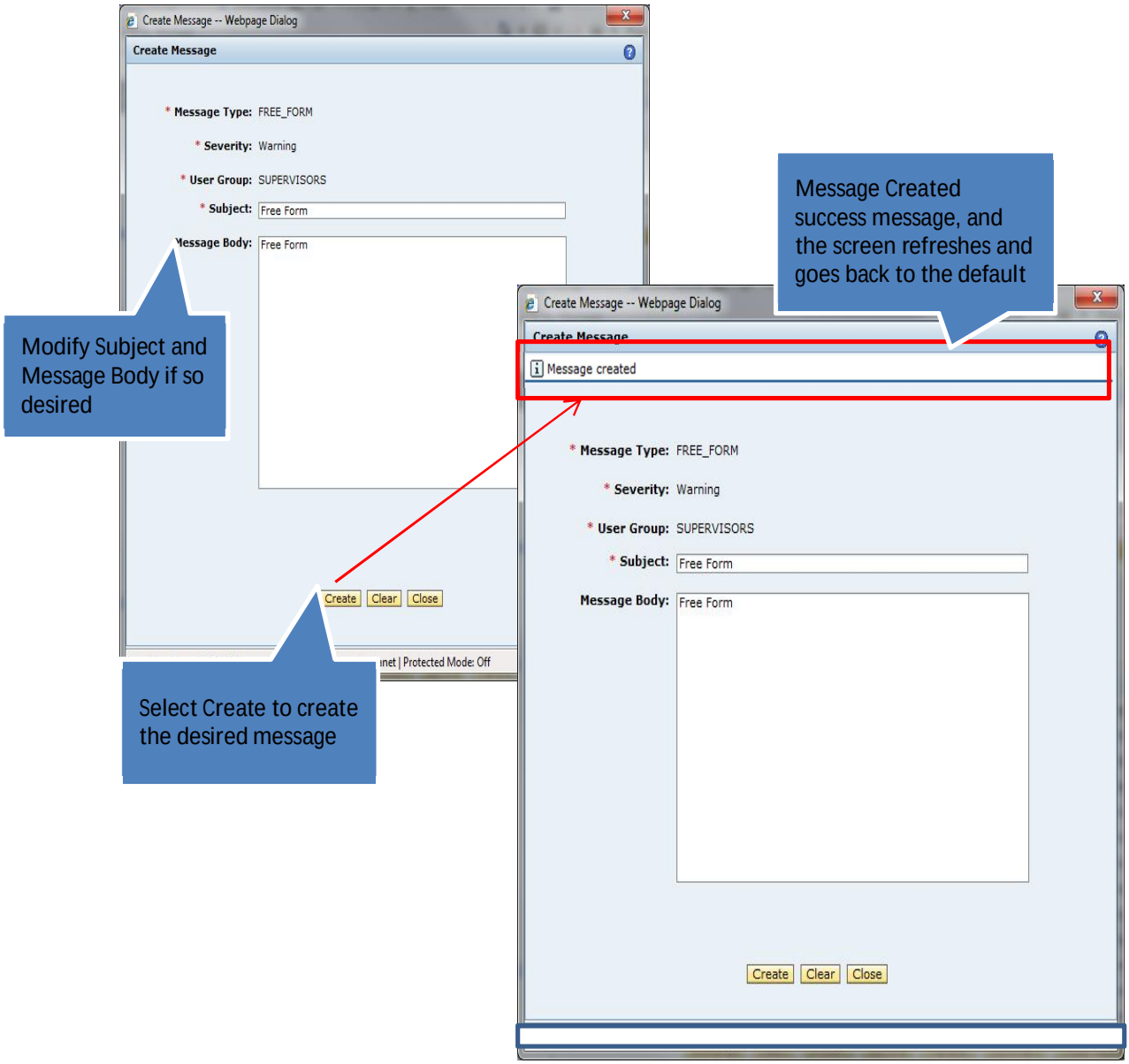
The purpose of this Message type is that there is a way for any user to generate Messages to the majority of User groups as an additional communication mechanism. Once the User enters the desired information and selects Create, the system will generate the Message to the Message Board and post a success message in the Create Message dialog. The dialog remains open so the user can create another Message, if needed. If not, they can close the dialog, which takes them back to the POD they were working in when Create was invoked.

3.3.3 Process Flow

The business process runs though the Message Board Plug-in and **CREATE_MESS_PLUGIN**.


Open Message Board POD
Select Create Message
Display Create Message dialog
Enter Subject and Message Body if desired or accept the default
Select Create Button
Message Created successfully
Select Close
Dialog closes and user is returned to the POD

Message Board Create Message screen flows


Create Message -- Webpage Dialog
Create Message
* Message Type: FREE_FORM
* Severity: Warning
* User Group: SUPERVISORS
* Subject: Free Form
Message Body: Free Form
Create
Clear
Close
Modify Subject and Message Body if so desired
Select Create to create the desired message
Message Created success message, and the screen refreshes and goes back to the default
Message created

3.3.4 Prerequisites

Process Workflow's must be created for Free Form Type messages or accept the default of SIMPLE.

Message Type Maintenance must have the FREE_FORM type message configured as desired or accept the default.

Message Board or POD must be configured to have the CREATE_MESS_PLUGIN assigned to a button.

3.3.5 Function Specific Setup

For setting up this function, see Pod Maintenance and Setting Up Message Board PODs. The Create Message Plug-in is intended to be launched as a standalone plug-in (Popup). It is not optimized for Popover or fixed panel configuration. The Activity CREATE_MESS_PLUGIN is used for this function.

3.3.6 Best Practices

We recommend that Create Message Plug-in be configured as a button and to be launched as a Popup. It may be applied to any POD or List plug-in. The privilege to create a message should be applied to all Users.

3.4 Real Time Message Display (RTMD)

3.4.1 Description and Applicability

Real Time Warnings Display has been converted to be used with the new Message Board functionality - The Real Time Message display shows up when configured to run in a POD. It shows up as an icon located next to the Help icon on the POD when messages are "flagged" as "POD Notification" on the Message Type (See Message Type Maintenance). This provides a quick and effective visual method of letting users know that there are messages that need immediate attention.

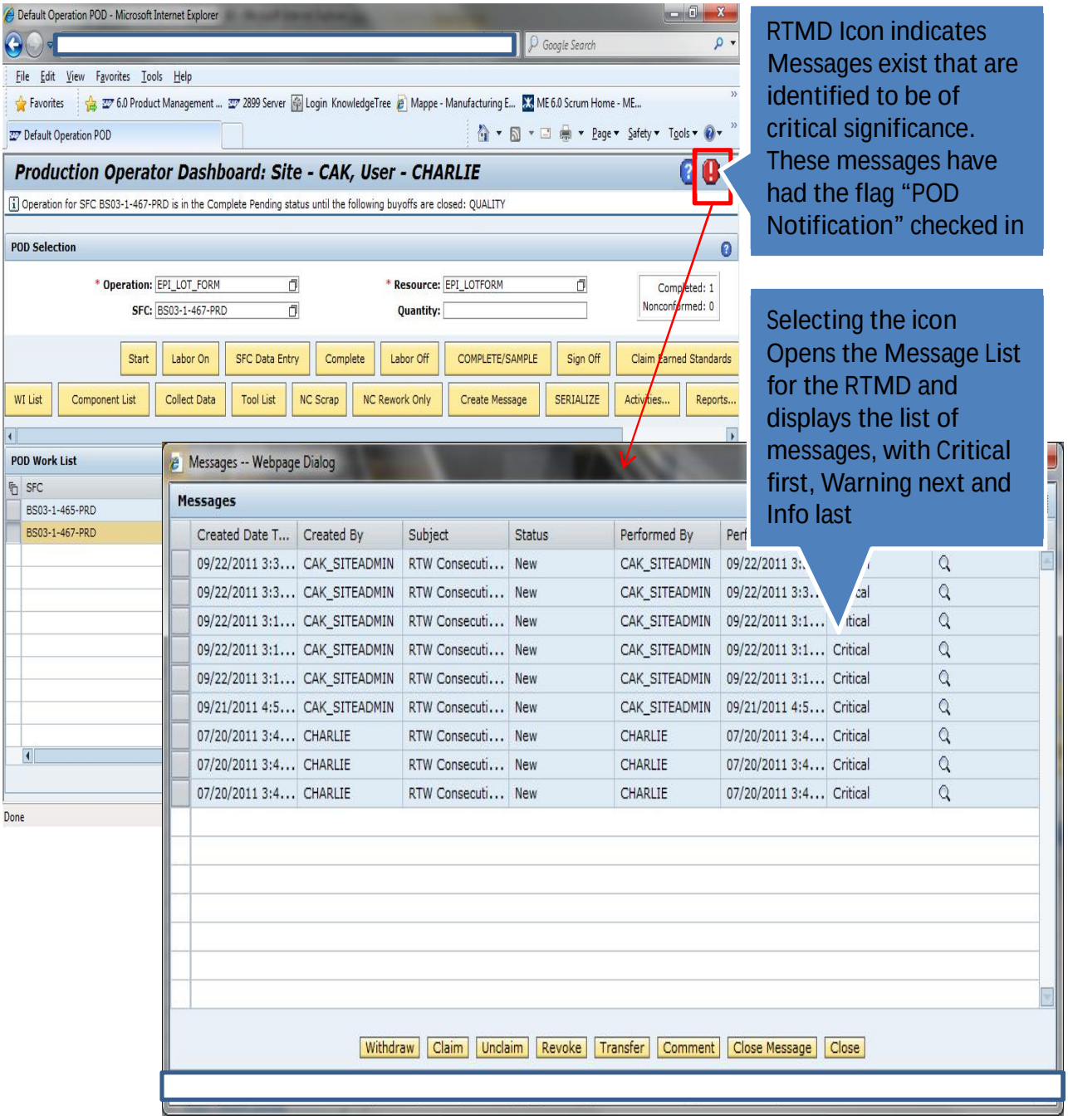
The color indicates the severity of the Message, as does the visual icon which is associated to the severity of the message. Messages can have a severity of Critical, Warning or Info. To view the Real Time Messages, the user simply clicks on the icon; this displays the Message list, with only those that have been flagged as POD Notification and further will filter them to display the Messages with Critical severity first in the list, then Warning and last Info. The Action buttons on the bottom of the list behave the same as in the Message Board, as well as the Details Icon and actions related to the Message displayed. The RTMD is a great tool for critical message notification for users who do not consistently monitor their Message Board queue and to inform users of messages of great importance. One last note, the Icon changes dynamically based on the Severity of the messages: Red for critical, Yellow for Warning and Blue for Info. The icon will display the color of the highest severity message, in this list, that is still Open. If no messages exist that are flagged for POD Notification, then the icon will not appear. The icon disappears once all messages in this list are no longer in an Open state. Messages that are flagged for Pod Notification appear in the Real Time Message display and in the Message Board List, but those that are not flagged do not display in the Real Time Message Display List.

3.4.2 Purpose / Effects

The purpose of the Real Time Message Display is to provide a “real time” aspect to the messaging system. This function provides visual indications (available for any POD) that real time messages exist which may be of an extremely important nature and should be considered for immediate processing.

RTMD provides a severity mechanism that differentiates simple messages from critical messages. It also provides a modified Message Board List, sorted by severity, which only displays the messages flagged for POD Notification. This helps the User determine which messages should be processed or viewed immediately due to the criticality of the message. Not all Message Types will need to be flagged for POD Notification. By default, the following message types are flagged: BUYOFF_REQUEST, RTW_CONSEC_NC, RTW_YIELD_RATE and ZERO_SLOT_QTY. When these types of Messages are generated due to shop floor business processing, they will be displayed on the Message Board and in the Real Time Message List.

Real Time Message Display (RTMD) Icon and List


RTMD Icon indicates Messages exist that are identified to be of critical significance. These messages have had the flag "POD Notification" checked in
Selecting the icon Opens the Message List for the RTMD and displays the list of messages, with Critical first, Warning next and Info last
Production Operator Dashboard: Site - CAK, User - CHARLIE
Messages -- Webpage Dialog
Messages
Withdraw
Claim
Unclaim
Revoke
Transfer
Comment
Close Message
Close

3.4.3 Prerequisites

A POD must be configured to have the Real Time Message Display set to "ICON".
Message Polling should be configured to poll for Real Time Messages.
At least one Message type should have the "POD Notification" checkbox checked.

3.4.4 Function Specific Setup

The Real Time Message Display activity is not available for configuration through Activity Maintenance. However, a Message Type may be flagged for POD Notification in Message Type Maintenance. This denotes that this type of Message will show up in the Real Time Message Display List. This is the same message list as the one defined for the Message Board, but it has been optimized to only display the list of message that are flagged as Real Time messages. So any Message that should be configured as a Real Time Message should have the POD Notification check box checked for that Message Type.

In POD Maintenance, the Real-Time Message Display element on the Main Tab (For Operation and Work Center type POD's) should be set to "ICON". This will turn the functionality on and will show the Real-Time Message Display list when the icon is clicked. If "NONE" is selected, no icon will be displayed and there will be no Real-Time Message Display for this POD.

A System Setup parameter should be configured to allow the system to "poll" (background process) the Messages generated to identify those that are flagged and display them in the Real Time Message List. The System Setup parameter, rted.polling.period.seconds, should be set to a short polling period to ensure that the messages are quickly included in the Real Time Messaging List of messages. By default this parameter is set at 5 seconds. This ensures the system is displaying the icon immediately whenever messages flagged for POD Notification are generated.

3.4.5 Best Practices

We recommend that you set up the Real Time Message display when there is a need to flag certain message types as more important than those that are simply generated to the Message Board alone.

4 Integration

N/A

5 Message Board Setup and Configuration

5.1 External Configuration

An E-mail Client should be available to receive the e-mail Notifications.

5.2 Maintenance Activities

Several new Activities (Message Type Maintenance, Message Board POD, Create Message, and Process Workflow etc) were created in support of the messaging functionality. Each of these activities has already been configured based on the functional flows of the Events and associated activities in the previous ME system. The new activities work together to create a robust, yet

flexible core Messaging system. Below are the desired and default configurations of the different Activities needed in support of Message Board for it to function efficiently and the order in which they should be considered to be configured.

5.2.1 System Rules

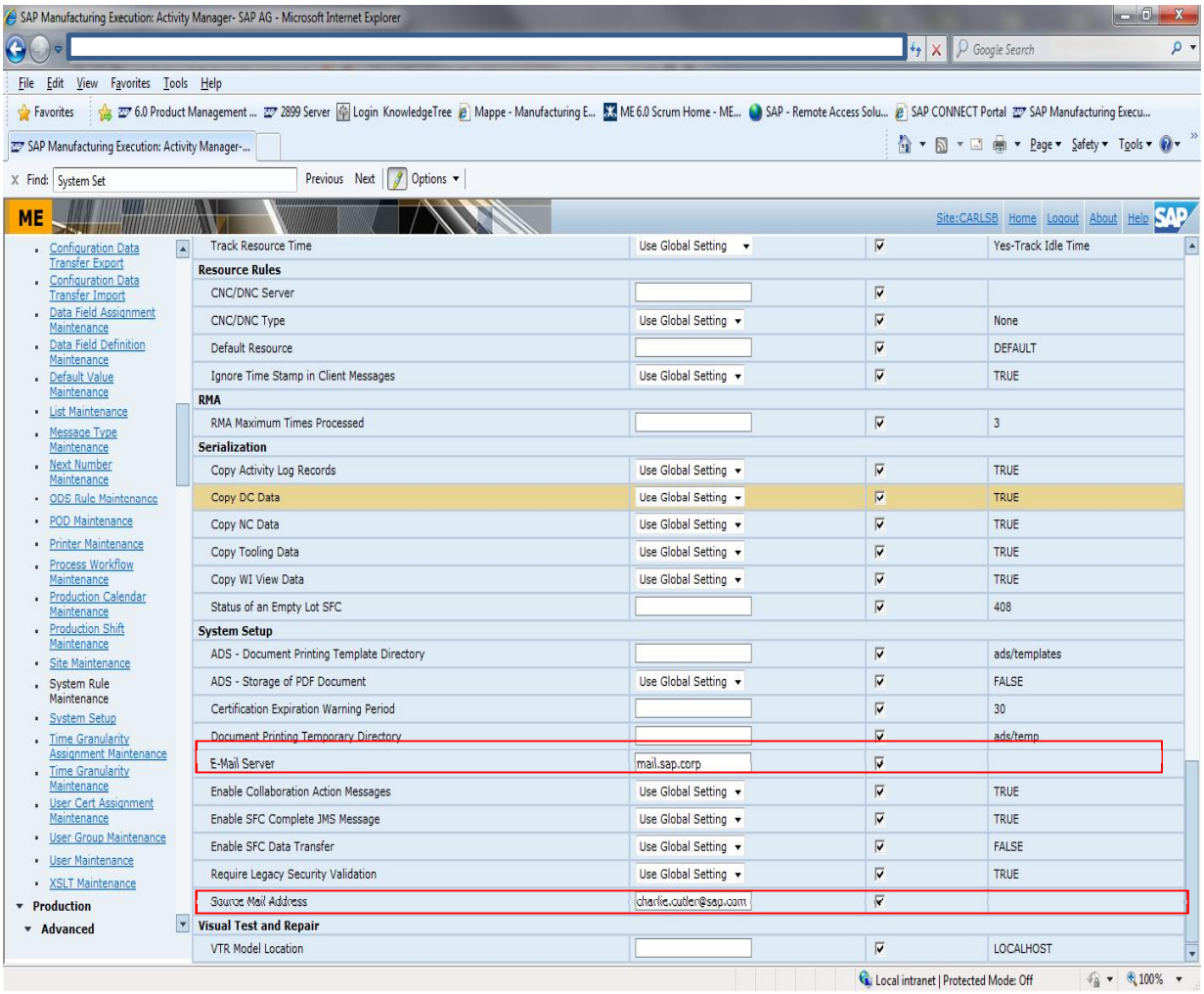
5.2.1.1 Rule

System Rule Maintenance

Modify the parameter, E-Mail Server, to support the ability to generate e-mail message notifications to any supported email client. This parameter should be set to your email sever name (for example; mail.sap.corp). This can be a global or Site specific setting.

Also, the parameter – Source Mail Address should be defined. This should be an organization e-mail address (for example; IT@SAP.com). This will be included as the "From" address message notification e-mails received by the addressee through their e-mail client. This can be a global or Site specific setting.

System Rule Maintenance Activity


SAP Manufacturing Execution: Activity Manager- SAP AG - Microsoft Internet Explorer
ME
Site:CARLSB Home Logout About Help
Track Resource Time | Use Global Setting | Yes-Track Idle Time
Resource Rules
CNC/DNC Server
CNC/DNC Type | Use Global Setting | None
Default Resource | DEFAULT
Ignore Time Stamp in Client Messages | Use Global Setting | TRUE
RMA
RMA Maximum Times Processed | 3
Serialization
Copy Activity Log Records | Use Global Setting | TRUE
Copy DC Data | Use Global Setting | TRUE
Copy NC Data | Use Global Setting | TRUE
Copy Tooling Data | Use Global Setting | TRUE
Copy WI View Data | Use Global Setting | TRUE
Status of an Empty Lot SFC | 408
System Setup
ADS - Document Printing Template Directory | ads/templates
ADS - Storage of PDF Document | Use Global Setting | FALSE
Certification Expiration Warning Period | 30
Document Printing Temporary Directory | ads/temp
E-Mail Server | mail.sap.corp
Enable Collaboration Action Messages | Use Global Setting | TRUE
Enable SFC Complete JMS Message | Use Global Setting | TRUE
Enable SFC Data Transfer | Use Global Setting | FALSE
Require Legacy Security Validation | Use Global Setting | TRUE
Source Mail Address | charlie.cutler@sap.com
Visual Test and Repair
VTR Model Location | LOCALHOST
Configuration Data Transfer Export
Configuration Data Transfer Import
Data Field Assignment Maintenance
Data Field Definition Maintenance
Default Value Maintenance
List Maintenance
Message Type Maintenance
Next Number Maintenance
ODS Rule Maintenance
POD Maintenance
Printer Maintenance
Process Workflow Maintenance
Production Calendar Maintenance
Production Shift Maintenance
Site Maintenance
System Rule Maintenance
System Setup
Time Granularity Assignment Maintenance
Time Granularity Maintenance
User Cert Assignment Maintenance
User Group Maintenance
User Maintenance
XSLT Maintenance
Production
Advanced

5.2.1.1.1 Purpose / Effects

Setting this parameter and coupled with e-mail addresses defined on the Message Type (on the Notification tab) will automatically generate an e-mail to the addressees when the Message Type is generated to the Message Board due to business processing. The E-mail will consist of simple text meta data but only includes the Message Type "SUBJECT and BODY" meta data. The purpose of allowing the system to also generate an e-mail, when a message is generated, is to allow that extra level of communication that exposes important messages to the right people when the business process dictates and when messages need to be viewed and processed in a timely manner. If e-mail addresses are not assigned on the Notification Tab of any Message Type, then no e-mail messages will be sent when messages are generated to the Message Board.

5.2.1.1.2 Settings / Example

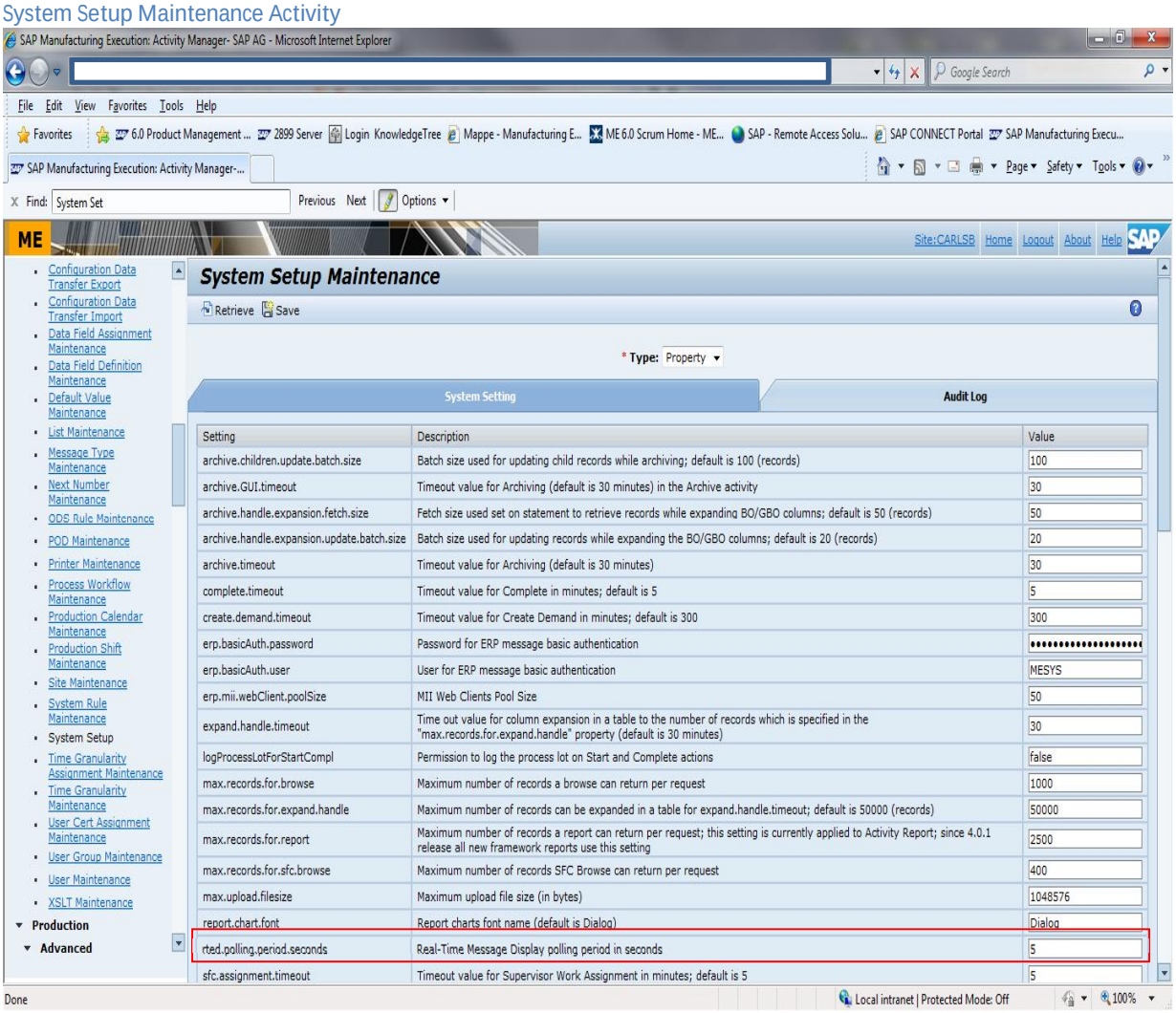
All three settings; e-mail addresses (defined on a Message Type, on the Notification tab), E-Mail Server and Source E-mail Address, must be configured properly for this function to work effectively

5.2.2 System Setup Parameters

5.2.2.1 Parameter

The Property, rted.polling.period.seconds, should be configured to allow the system to "poll", via a background process, for messages that are flagged for POD Notification, to display them on the Real Time Message Display List. The parameter should be set to a very short period so as to not delay the display of real time messages to the RTMD list.

System Setup Maintenance Activity


SAP Manufacturing Execution: Activity Manager- SAP AG - Microsoft Internet Explorer
System Setup Maintenance
Retrieve
Save
* Type: Property
System Setting
Audit Log
Setting
Description
Value
archive.children.update.batch.size
Batch size used for updating child records while archiving; default is 100 (records)
100
archive.GUI.timeout
Timeout value for Archiving (default is 30 minutes) in the Archive activity
30
archive.handle.expansion.fetch.size
Fetch size used set on statement to retrieve records while expanding BO/GBO columns; default is 50 (records)
50
archive.handle.expansion.update.batch.size
Batch size used for updating records while expanding the BO/GBO columns; default is 20 (records)
20
archive.timeout
Timeout value for Archiving (default is 30 minutes)
30
complete.timeout
Timeout value for Complete in minutes; default is 5
5
create.demand.timeout
Timeout value for Create Demand in minutes; default is 300
300
erp.basicAuth.password
Password for ERP message basic authentication
erp.basicAuth.user
User for ERP message basic authentication
MESYS
erp.mii.webClient.poolSize
MII Web Clients Pool Size
50
expand.handle.timeout
Time out value for column expansion in a table to the number of records which is specified in the "max.records.for.expand.handle" property (default is 30 minutes)
30
logProcessLotForStartCompl
Permission to log the process lot on Start and Complete actions
false
max.records.for.browse
Maximum number of records a browse can return per request
1000
max.records.for.expand.handle
Maximum number of records can be expanded in a table for expand.handle.timeout; default is 50000 (records)
50000
max.records.for.report
Maximum number of records a report can return per request; this setting is currently applied to Activity Report; since 4.0.1 release all new framework reports use this setting
2500
max.records.for.sfc.browse
Maximum number of records SFC Browse can return per request
400
max.upload.filesize
Maximum upload file size (in bytes)
1048576
report.chart.font
Report charts font name (default is Dialog)
Dialog
rted.polling.period.seconds
Real-Time Message Display polling period in seconds
5
sfc.assignment.timeout
Timeout value for Supervisor Work Assignment in minutes; default is 5
5
Production
Advanced
System Setup

5.2.2.1.1 Purpose / Effects

Setting this Property ensures that messages flagged for POD Notification display in a timely manner on the RTMD. By Default this property is configured to "5"

(seconds). This ensures that every 5 seconds the system is polling to see if any new messages are flagged for display in the RTMD list. If this property is not configured, then messages will not be displayed on the RTMD list even if they are flagged for POD Notification.

5.2.2.1.2 Settings / Example

All three of the following criteria must be set up before the RTMD will properly display messages.

- POD Notification in Message Type Maintenance
- rted.polling.period.seconds
- Real Time Message Display (set to "ICON" In POD Maintenance)

5.2.3 Activity Rules

N/A

5.2.4 Activity Hooks

N/A

5.2.5 Product Configuration

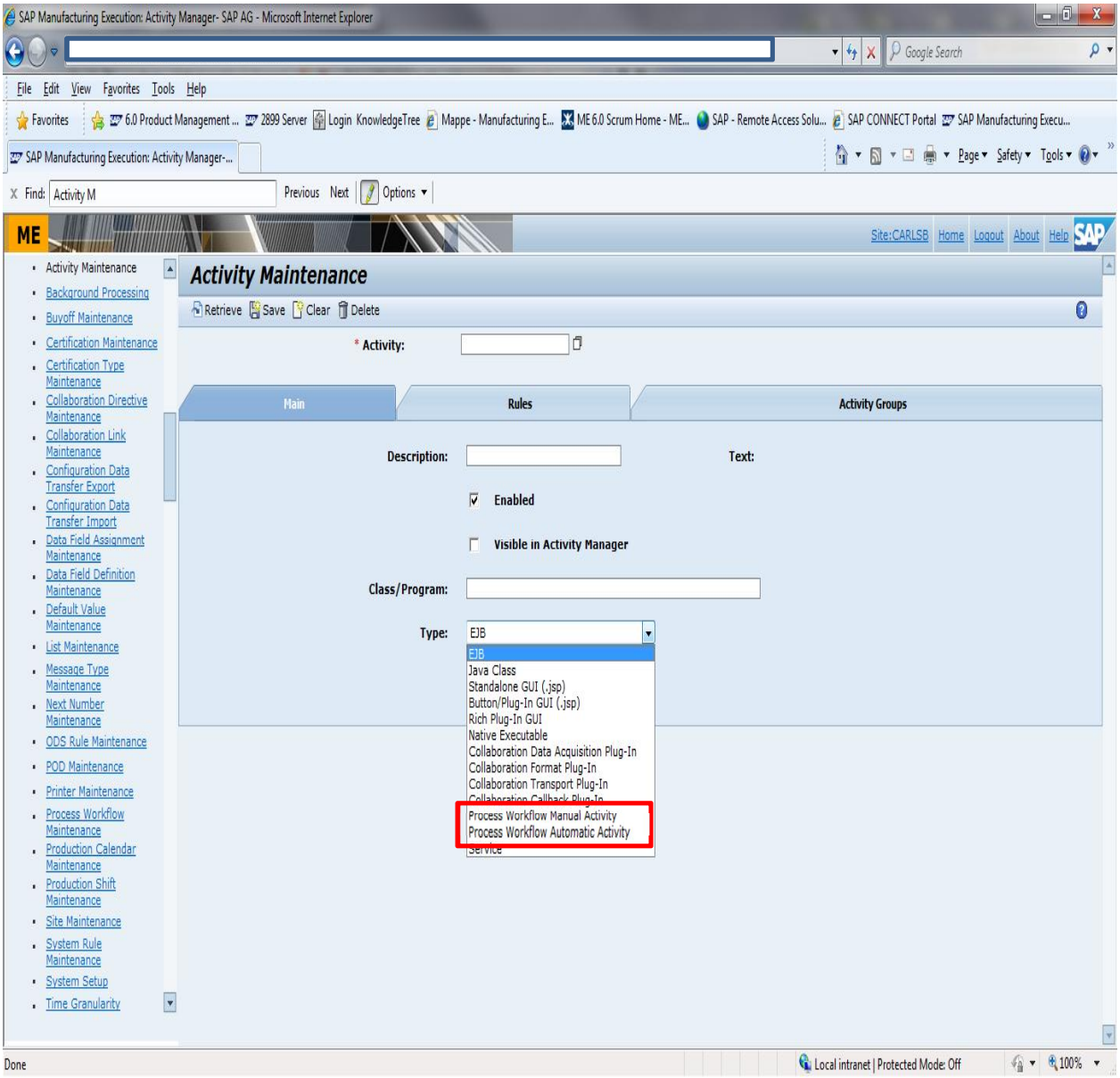
5.2.5.1 Activity Maintenance

Many new activities have been created in support of the new Message Board functionality while others have been removed as they are no longer required or were redundant.

As is evidenced by the list below, many new Process Workflow specific activities were created to support the current processing strategy for RTMD and SPC processing, as well as enhanced Buyoff processing. Several of the old Event activities were broken down and separated to create new activities which allows for a greater level of flexibility in processing of messages when these activities are applied to the SPC and RTMD type Messages.

Several completely new activities have been created to support the Free form process, as well as the simplified workflow activity called SIMPLE. This workflow activity does not require robust processing like Buyoff requests, RTMD or SPC processing. All of these activities have been designed to be either Automatic or Manual process workflow steps.

New Activity types for Message Board



Automatic means that the system will complete the step when one of the following things happens:

1) The Message is generated to the system (automatic Holds are placed on resources and operations if this step exists on a Workflow)

2) A Manual step has been completed by a user (Log Codes, or Accept or Reject of a buyoff has been completed)

If no other Process Workflow activities (steps) exist on a workflow, for a given message type, and Auto Close On Process Workflow Completion has been set for the specified Message type, the message is automatically set to Closed.

It is important to note, that changing any of the activities settings for these new activities will adversely affect the processing of the message types they have been assigned to the activity. These activities have been designed to provide specific flows for the messages.

5.2.5.1.1 Purpose / Effects

In an effort to provide a more robust and process oriented messaging system some new Activities were created, while others were modified or removed. Below is a list of all activities that have an effect on the Message Board.

5.2.5.1.2 Settings / Example

New Activities

- CREATE_MESS_PLUGIN (Create Message)

  Activity used to invoke the Create Free form message dialog, from a POD or from Message Board

- MESSAGE_BOARD (Message Board)

  Activity used to define the Default Message Board as a Standalone POD

- MESSAGE_BOARD_PANEL (Message Board Selection Panel)

  Activity Used to define the Selection (filter) criteria attributes on Message Board POD

- MESSAGE_BOARD_LIST (Message List)

  Activity Used to define the List (table) columns, rows and Action buttons on Message Board POD

- MSG_TYPE_MAINT (Message Type Maintenance)

  Activity Used to define the different Message types and their unique configurations available to the Message Board POD

- PROCESS_WF (Process Workflow)

  Activity Used to define the Process Workflow templates to be applied to Message types

  New Process Workflow Activities (Used for Process Workflow only)

- ACCEPT_BUYOFF (Accept Buyoff)

  Process Workflow Activity used to invoke the Accept Action on Buyoff Request type Messages. Manual workflow step.

- CONSEC_NC_OP_HOLD (Consec NC Operation Hold)

  Process Workflow Activity used to invoke the automatic Operation Hold on RTW Consecutive NC type Messages due to Real-Time Warnings Maintenance thresholds being met for Consecutive Identical NC being reached. Automatic Workflow step.

- CONSEC_NC_RES_HOLD (Consec NC Resource Hold)

  Process Workflow Activity used to invoke the automatic Resource Hold on RTW Consecutive NC type Messages due to Real-Time Warnings Maintenance thresholds being met for Consecutive Identical NC being reached. Automatic Workflow step.

- LOG_CODES (Log Codes)

  Process Workflow Activity used during Processing of SPC type messages used to invoke the Log Codes dialog where Corrective actions codes/Comments may be added. Manual Workflow step.

- OP_HOLD_RELEASE (Operation Release Hold)

  Process Workflow Activity used during Processing of SPC and RTW type messages used to automatically Release a hold placed on an Operation due to the Log Codes being completed. Automatic Workflow step.

- REJECT_BUYOFF (Reject Buyoff)

  Process Workflow Activity used to invoke the Reject Action on Buyoff Request type Messages, which also invoked the Simple LOGNC_REJECT. Manual Workflow step.

- RES_HOLD_RELEASE (Resource Release Hold)

  Process Workflow Activity used during Processing of SPC and RTW type messages used to automatically Release a hold placed on a Resource due to the Log Codes being completed. Automatic Workflow step

- YIELD_OP_HOLD (RTW Yield Rate Operation Hold)

  Process Workflow Activity used during Processing of RTW type messages used to automatically place a hold placed on an Operation due to the message being generated due to Real-Time Warnings Maintenance thresholds being met for RTW Yield. Automatic Workflow step

- YIELD_RES_HOLD (RTW Yield Rate Resource Hold)

  Process Workflow Activity used during Processing of RTW type messages used to automatically place a hold placed on a Resource due to the message being generated due to Real-Time Warnings Maintenance thresholds being met for RTW Yield. Automatic Workflow step

- SPC_VIOL_OP_HOLD (SPC Violation Operation Hold)

  Process Workflow Activity used during Processing of SPC Violation type messages used to automatically place a hold placed on an Operation due to the message being generated due to SPC Alarm Severity Maintenance thresholds being violated. Automatic Workflow step

- SPC_VIOL_RES_HOLD (SPC Violation Resource Hold)

  Process Workflow Activity used during Processing of SPC Violation type messages used to automatically place a hold placed on a Resource due to the message being generated due to SPC Alarm Severity Maintenance thresholds being violated. Automatic Workflow step

- SPC_WARN_OP_HOLD (SPC Warning Operation Hold)

  Process Workflow Activity used during Processing of SPC Warning type messages used to automatically place a hold placed on an Operation due to the message being generated due to SPC Alarm Severity Maintenance thresholds being violated. Automatic Workflow step

- SPC_WARN_RES_HOLD (SPC Warning Resource Hold)

  Process Workflow Activity used during Processing of SPC Warning type messages used to automatically place a hold placed on a Resource due to the message being generated due to SPC Alarm Severity Maintenance thresholds being violated. Automatic Workflow step

These previously unique Event activities have been modified / enhanced and converted into Process Workflow activities (steps) used for processing of SPC and RTW type Messages.

We found that if we split up the Event activities into more manageable pieces and combining others that we could maximize these activities to be used in the Process Workflow templates needed for the processing needs of the RTW and SPC type messages and make them flexible as well as keeping the existing requirements to provide automatic OPERATION AND RESOURCE holds where required, when a Warning or Violation, or Identical NC count or Yield threshold is close or has been met. Also we have included two additional activities OP_HOLD_RELEASE and

RES_HOLD_RELEASE will perform the automatic Release of an existing hold, based on the user performing a prior manual activity step.

These Process Workflow activities have been assigned to Process Workflow templates, in Process Workflow maintenance, and these Process Workflows have been assigned to the appropriate Message Types, for SPC and RTW message types, in Message Type Maintenance.

5.2.6 System Configuration

5.2.6.1 Process Workflow Maintenance

5.2.6.1.1 Purpose / Effects

Process Workflow Maintenance is a New Activity created specifically for the Message Board. It provides the capability to provide business and logical steps that must be completed in order for a message to be processed. This is similar to many workflow engines you may find in other applications for emulating business processes in a digital environment. It is designed to incorporate Activities that are defined as Process Workflow Activities and invoke those activities at the appropriate time. Activities can be invoked either through manual user involvement or automatically by the system.

5.2.6.1.2 Settings / Example

Following are examples of several different Process workflow templates; with one-to many steps (rows in the table). Some steps are manual and some are performed automatically. These examples; BUYOFF_WF, OP_RES_HOLD_YIELD_RATE and SIMPLE all serve a very specific purpose. They have already been applied to Message Types for BUYOFF_REQUEST, RTW_YIELD_RATE and FREE_FORM, as well as other Message types where these process workflows satisfy the message processing requirements. The following paragraphs break down one of these flows and explain in detail what the expectation is when this process is assigned to a Message Type.

The OP_RES_HOLD_YIELD_RATE is one of the more complex processing workflows. It has been specifically applied to SPC Yield Rate (As defined in SPC Alarm Severity Maintenance) Message Types. In this case there are 5 steps (Sequence 10-50) that have been applied to this process. So it means that all 5 steps will need to be completed during the processing of the Message, when that Message has been generated (sent) to the Message Board, due to the SPC Yield thresholds being met.

Sequence 10 YIELD_RES_HOLD and 20 YIELD_OP_HOLD are activities which have been defined as Automatic process workflow steps. So in this case, at the moment the message is generated, these two steps are automatically processed and the Operation and Resource are placed on HOLD. These activities are completed automatically by the system and the next step in the processing, Sequence 30 LOG_CODES, become active on the Message.

The LOG_CODES activity has been configured to be a Manual process, so this means that the user is required to perform a manual action here. In this case it is to click on the Button called Log Codes on the message Details screen in Message Board. When this manual action is taken by the user, an entry dialog is posted where the user is able to enter the Required Codes, as defined in the LOG_CODES Activity Rules. Once the user has entered the data and clicks the Log Codes action on the dialog, the Codes and associated text are saved to the Message Details Log and the step gets completed.

At this time, the next two activities, Sequence 40 OP_HOLD_RELEASE and 50 RES_HOLD_RELEASE, are activated. In this case, these Process Workflow Activities have been configured to be Automatic. This means the system will automatically perform the action required here, which is to release the Hold on the Operation and Resource (that was placed when the Message was generated) and complete these activities. At this point all steps have been completed and processed, either by the system or manually by the user. The Message processing is satisfied and the message will then be closed. Even though the message processing seems complex, what the user experiences on the Message Board is really only one manual step, to Log Codes, to process the message. Many other things happened or actions were invoked by the system based on the other process steps. This is an example of how these process workflow activities and templates can accomplish a great many of the business processes needed to handle production anomalies or other occurrences.

Now that we have our templates, we can apply them to Message Types. The table below describes the Out of the Box Process Workflows created for specific Message Types:

Process Workflow	Description	Message Type used for
BUYOFF_WF	Buyoff Message Processing	BUYOFF_REQUEST

OP_RES_HOLD_CONSEC_NC	Oper Res Hold Consec NC	RTW_CONSEC_NC
OP_RES_HOLD_SPC_VIOL	Oper Res Hold SPC Violation	SPC_ALARM_VIOLATION
OP_RES_HOLD_SPC_WARN	Oper Res Hold SPC Warning	SPC_ALARM_WARNING
OP_RES_HOLD_YIELD_RATE	Operation/Resource Hold Yield Rate	RTW_YIELD_RATE
SIMPLE	Simple	FREE_FORM and all other Message types

Process Workflow Default Configurations:

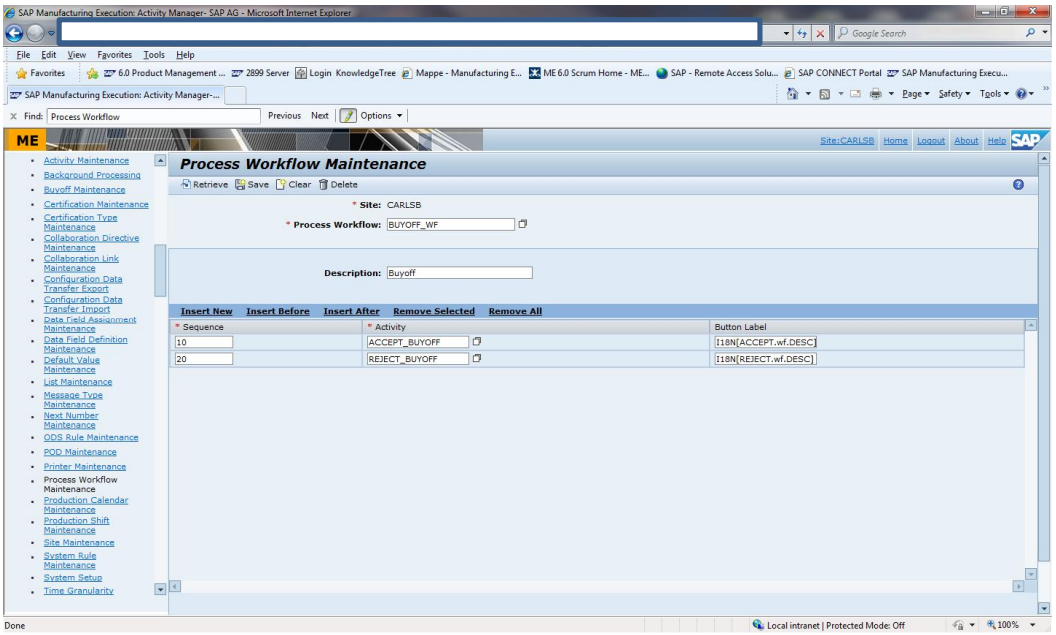
Process Workflow: BUYOFF_WF

Description: Buyoff

Sequence: 10, Activity: ACCEPT_BUYOFF, Button Label: I18N[ACCEPT.wf.DESC]

Sequence: 20, Activity: REJECT_ACTIVITY, Button Label: I18N[REJECT.wf.DESC]

Buyoff Workflow



Process Workflow: OP_RES_HOLD_CONSEC_NC

Description: Oper Res Hold Consec NC

Sequence: 10, Activity: CONSEC_NC_RES_HOLD, Button Label: Blank

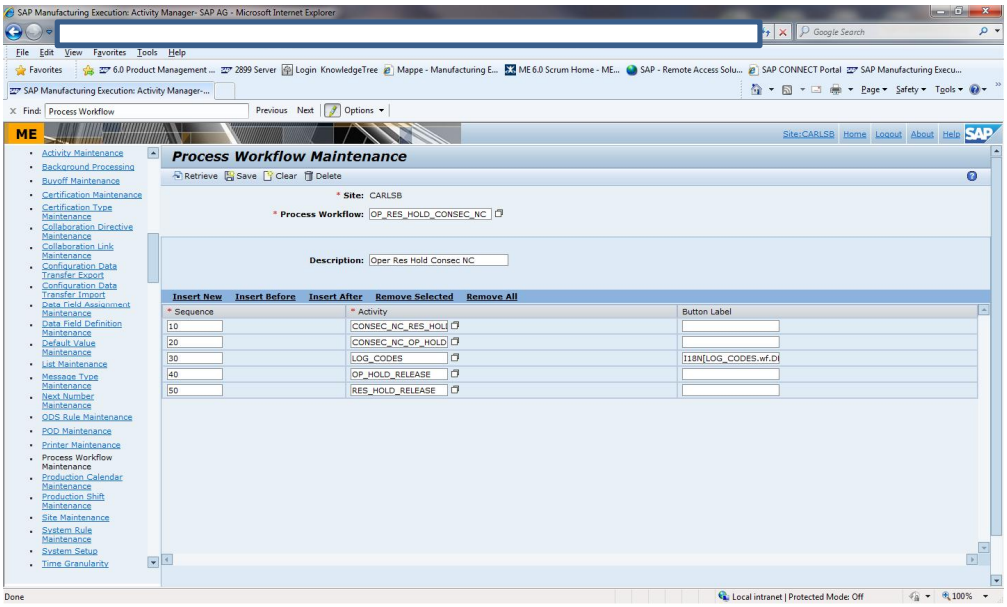
Sequence: 20, Activity: CONSEC_NC_OP_HOLD, Button Label: Blank

Sequence: 30, Activity: LOG_CODES, Button Label: I18N[LOG_CODES.wf.DESC]

Sequence: 40, Activity: OP_HOLD_RELEASE, Button Label: Blank

Sequence: 50, Activity: RES_HOLD_RELEASE, Button Label: Blank

Oper Res Hold Consec NC Workflow



Process Workflow: OP_RES_HOLD_SPC_VIOL

Description: Oper Res Hold SPC Violation

Sequence: 10, Activity: SPC_VIOL_RES_HOLD, Button Label: Blank

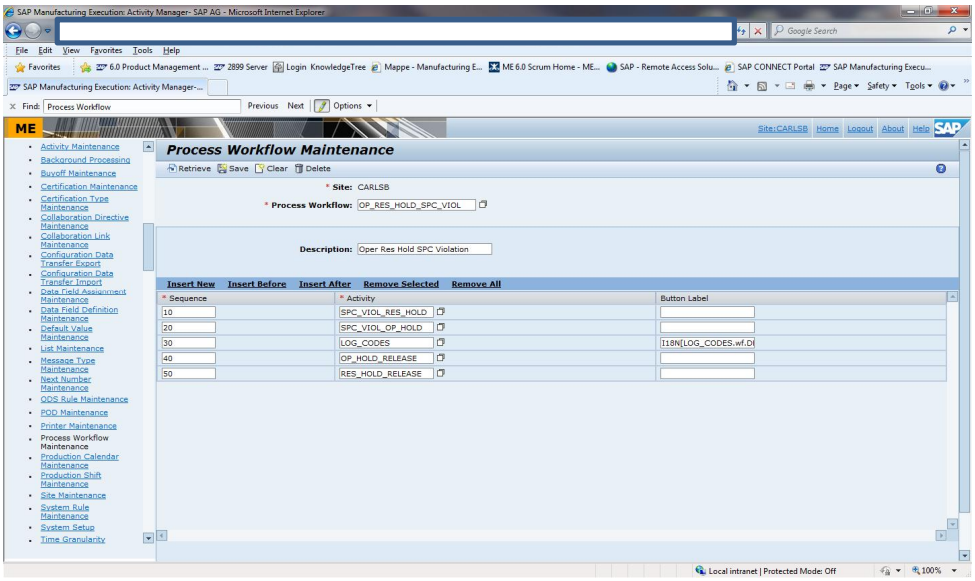
Sequence: 20, Activity: SPC_VIOL_OP_HOLD, Button Label: Blank

Sequence: 30, Activity: LOG_CODES, Button Label: I18N[LOG_CODES.wf.DESC]

Sequence: 40, Activity: OP_HOLD_RELEASE, Button Label: Blank

Sequence: 50, Activity: RES_HOLD_RELEASE, Button Label: Blank

Oper Res Hold SPC Violation Workflow



Process Workflow: OP_RES_HOLD_SPC_WARN

Description: Oper Res Hold SPC Warning

Sequence: 10, Activity: SPC_WARN_RES_HOLD, Button Label: Blank

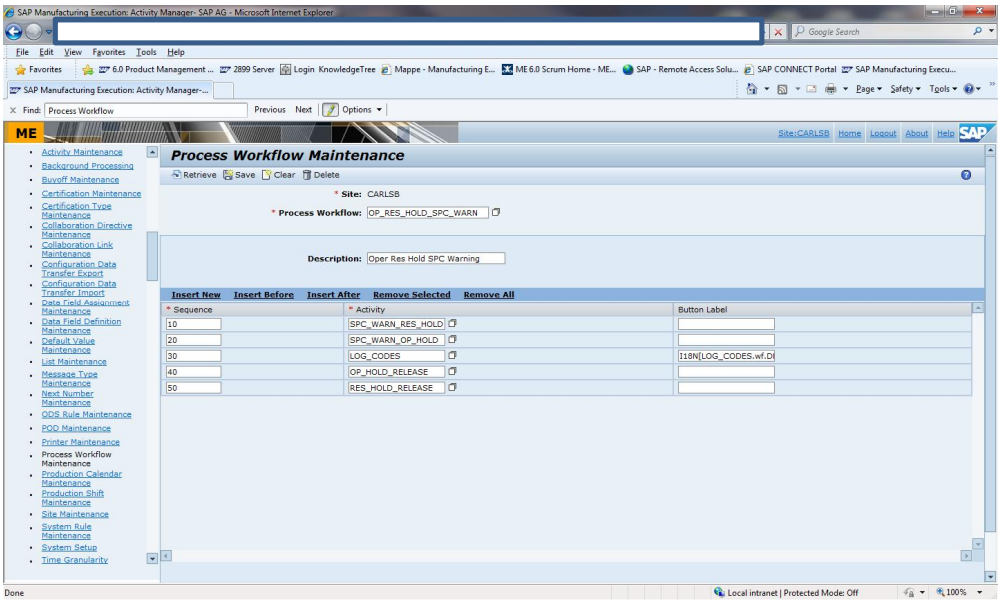
Sequence: 20, Activity: SPC_WARN_OP_HOLD, Button Label: Blank

Sequence: 30, Activity: LOG_CODES, Button Label: I18N[LOG_CODES.wf.DESC]

Sequence: 40, Activity: OP_HOLD_RELEASE, Button Label: Blank

Sequence: 50, Activity: RES_HOLD_RELEASE, Button Label: Blank

Oper Res Hold SPC Warning Workflow



Process Workflow: OP_RES_HOLD_YIELD_RATE

Description: Operation/Resource Hold Yield Rate

Sequence: 10, Activity: YIELD_RES_HOLD, Button Label: Blank

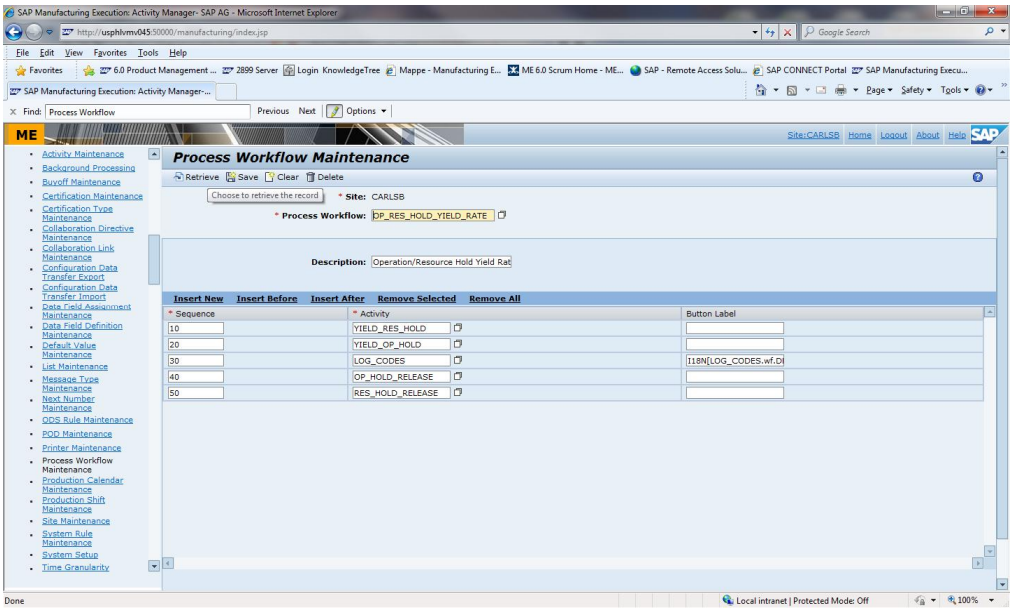
Sequence: 20, Activity: YIELD_OP_HOLD, Button Label: Blank

Sequence: 30, Activity: LOG_CODES, Button Label: I18N[LOG_CODES.wf.DESC]

Sequence: 40, Activity: OP_HOLD_RELEASE, Button Label: Blank

Sequence: 50, Activity: RES_HOLD_RELEASE, Button Label: Blank

Operation/Resource Hold Yield Rate Workflow

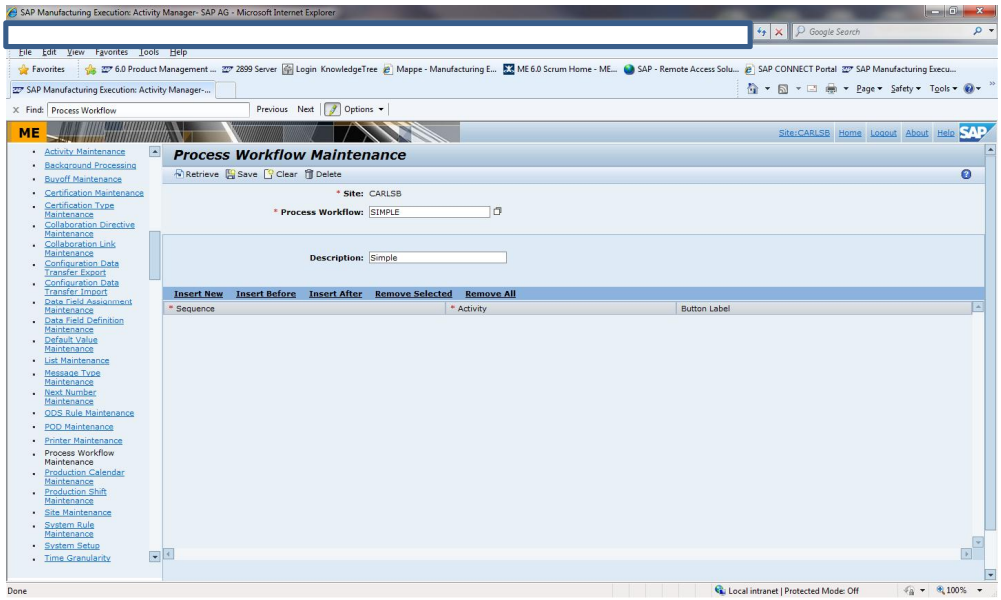


Process Workflow: SIMPLE

Description: Simple

Table is Blank

Simple Workflow



5.2.6.1.3 Best Practices – The Process Workflow templates described above have been created specifically for the Message types that currently exist in the system. We recommend that, if you need the message workflows to behave differently, you work with an SAP representative to identify the business activities needed, create new ones if necessary, group them into Process Workflow templates and then assign them to the desired Message types (new or existing).

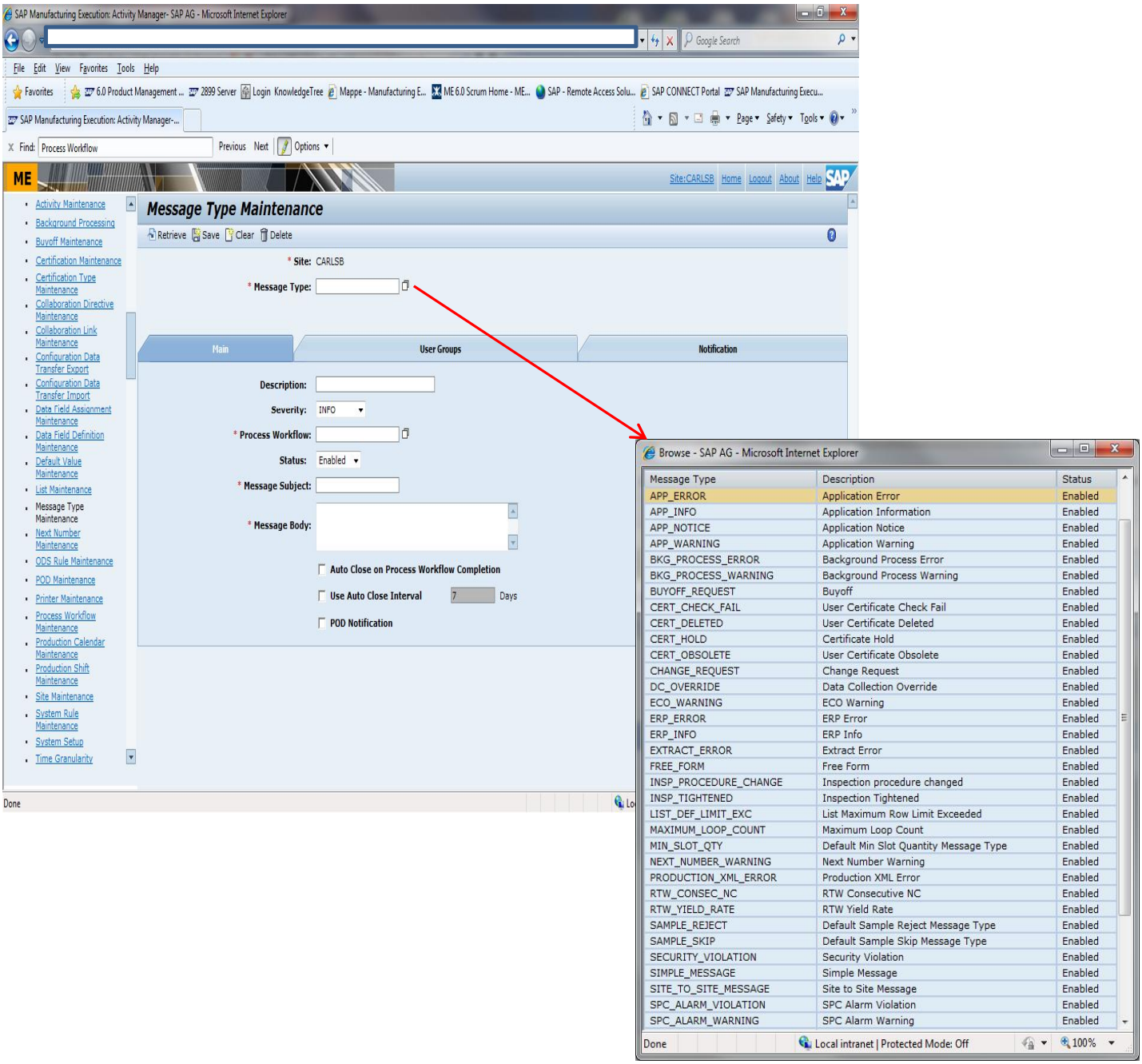
5.2.6.2 Message Type Maintenance

5.2.6.2.1 Purpose / Effects

The next step in setting up the Messages to be able to use the Message Board functionality is to configure the Messages types in Message Type Maintenance. This activity is used to create, manage and maintain the Message Types. This includes defining what types of messages are generated to the Message Board and how they will be processed (assigning Process Workflows). It also includes defining the additional meta data to be included in the Message Subject and Message Body, with manually entered text or the use of replaceable parameters (like: %MESSAGE_TYPE%, %UNIT_SFC%, %ALL% etc). Also additional check boxes for Auto Close On Process Workflow Completion, Use Auto Close Interval and POD Notification are available to control message processing.

A core set of Message Types have been predefined. These correspond to the core Events from earlier versions of ME that have been migrated and translated into Message Types. Each one has been translated and configured to be processed similarly to the way it was when it was an Event. Process workflows have been assigned; the appropriate check boxes have been checked; and the appropriate text, replaceable parameters and User Groups have been assigned.

Message Type Maintenance Activity


SAP Manufacturing Execution: Activity Manager- SAP AG - Microsoft Internet Explorer
Message Type Maintenance
Retrieve
Save
Clear
Delete
* Site: CARLSB
* Message Type:
Main
User Groups
Notification
Description:
Severity: INFO
* Process Workflow:
Status: Enabled
* Message Subject:
* Message Body:
Auto Close on Process Workflow Completion
Use Auto Close Interval 7 Days
POD Notification
Browse - SAP AG - Microsoft Internet Explorer
Message Type | Description | Status
APP_ERROR | Application Error | Enabled
APP_INFO | Application Information | Enabled
APP_NOTICE | Application Notice | Enabled
APP_WARNING | Application Warning | Enabled
BKG_PROCESS_ERROR | Background Process Error | Enabled
BKG_PROCESS_WARNING | Background Process Warning | Enabled
BUYOFF_REQUEST | Buyoff | Enabled
CERT_CHECK_FAIL | User Certificate Check Fail | Enabled
CERT_DELETED | User Certificate Deleted | Enabled
CERT_HOLD | Certificate Hold | Enabled
CERT_OBSOLETE | User Certificate Obsolete | Enabled
CHANGE_REQUEST | Change Request | Enabled
DC_OVERRIDE | Data Collection Override | Enabled
ECO_WARNING | ECO Warning | Enabled
ERP_ERROR | ERP Error | Enabled
ERP_INFO | ERP Info | Enabled
EXTRACT_ERROR | Extract Error | Enabled
FREE_FORM | Free Form | Enabled
INSP_PROCEDURE_CHANGE | Inspection procedure changed | Enabled
INSP_TIGHTENED | Inspection Tightened | Enabled
LIST_DEF_LIMIT_EXC | List Maximum Row Limit Exceeded | Enabled
MAXIMUM_LOOP_COUNT | Maximum Loop Count | Enabled
MIN_SLOT_QTY | Default Min Slot Quantity Message Type | Enabled
NEXT_NUMBER_WARNING | Next Number Warning | Enabled
PRODUCTION_XML_ERROR | Production XML Error | Enabled
RTW_CONSEC_NC | RTW Consecutive NC | Enabled
RTW_YIELD_RATE | RTW Yield Rate | Enabled
SAMPLE_REJECT | Default Sample Reject Message Type | Enabled
SAMPLE_SKIP | Default Sample Skip Message Type | Enabled
SECURITY_VIOLATION | Security Violation | Enabled
SIMPLE_MESSAGE | Simple Message | Enabled
SITE_TO_SITE_MESSAGE | Site to Site Message | Enabled
SPC_ALARM_VIOLATION | SPC Alarm Violation | Enabled
SPC_ALARM_WARNING | SPC Alarm Warning | Enabled

5.2.6.2.2 Settings / Example

The following information provides more detail around some of these other configuration attributes and their uses.

- The Severity drop down can be used to assign a severity range to your message type to indicate how important this message is to the User Group community when generated to the. In the Message board, this gives a visual

indication of its importance. It is also used to sort messages and to apply a specific color code and icon to display in the RTMD mechanism within the POD.

- The user can apply the appropriate Process Workflow to the Message Type. The browse will show only Process Workflows available for selection.

- The user can set the Message Type to Enabled or Disabled in the Status drop down. If enabled, this type can be generated to the message Board, but if disabled, this type cannot. However, disabling it does not stop the other processing within the application; the message is just not generated to Message Board.

- The User can define the Subject and Message Body to be included in the message. This information will be included every time the message type is generated to the Message Board. For instance, in the FREE_FORM Message Type example, the text is "Free Form" for both. The entered text is what you will see in the message, when it appears in Message board, exactly as typed. You can also put replaceable parameters in these areas, and the system will include the Meta data for those parameters when the message is generated. If the parameter has no corresponding Meta data, you will only see the Parameter name in the Message.

- You can check the Auto Close on Process Workflow Completion check box if you wish to have the system close the message automatically once all steps in the Process Workflow, applied to the Message type, are completed and where all other Manual processes have been completed. This means that the user does not have to manually close the message once all processing is complete.

- You may check the Use Auto Close Interval checkbox to close messages on the message board where no user interaction is necessary. An example is an Info Message sent out to all user groups, where no one user is required to close the Message. By setting this check box, and defining the message display interval of Days, this will ensure that these automatically processed type messages will be viewable on the Message Board for at least the interval specified. After the message display interval has passed, the Background Process "Auto Close Message by the System" will close the message automatically the next time it runs. If this process is not configured to run, the messages will not be automatically closed.

- Check the POD Notification check box if you want the Message to be displayed via the RTMD mechanism. This will ensure that messages of this Message type will be displayed in this "Real Time" list of messages. The RTMD list of Messages only shows the messages that have this check box checked,

while the Message Board shows all messages, including these that have been flagged. The Message Board does not provide the color coding and Icon based on the severity like the RTMD does.

- The Message type may be assigned to User Groups on the User Groups Tab. The assignment of User groups means that only users who are members of the assigned User groups will see messages with this message type on the Message List. The user must be assigned to the user groups to be able to perform any processing on the message. For example, if the message type is assigned to ADMINISTRATOR, SUPERVISORS, OPERATORS, and MANAGERS User Groups, this means that any user that is assigned to one or more of those User Groups can process this message in the Message Board. Messages of this Message Type will show up for all users who are in any of these groups.

- You can assign e-mail notification on the Notification tab if it is necessary to send an e-mail when a Message of that Message type is generated to the Message Board. This is another level of convenience for ensuring that the message will not go unnoticed. You can also use this to track which message types are being generated more often, by tracking how many messages are received for a specific Message type at an e-mail client inbox. For messages to be sent, the E-Mail Server rule in System Rule Maintenance, at the Global level, in the System Setup section must be defined.

Note: Only messages of the FREE_FORM type can be generated manually by a user. All other types are generated by the system through some other activity, action or process being invoked while working in the SAP ME system.

Message Type Maintenance allows a user to:

- Create, manage and maintain Message Types and additional Message meta data
- Assign Process Workflows to the Message Type
- Manage additional processing requirements of the Message type
- Assign E-mail addresses to Message types
- Assign User Groups to Message Types

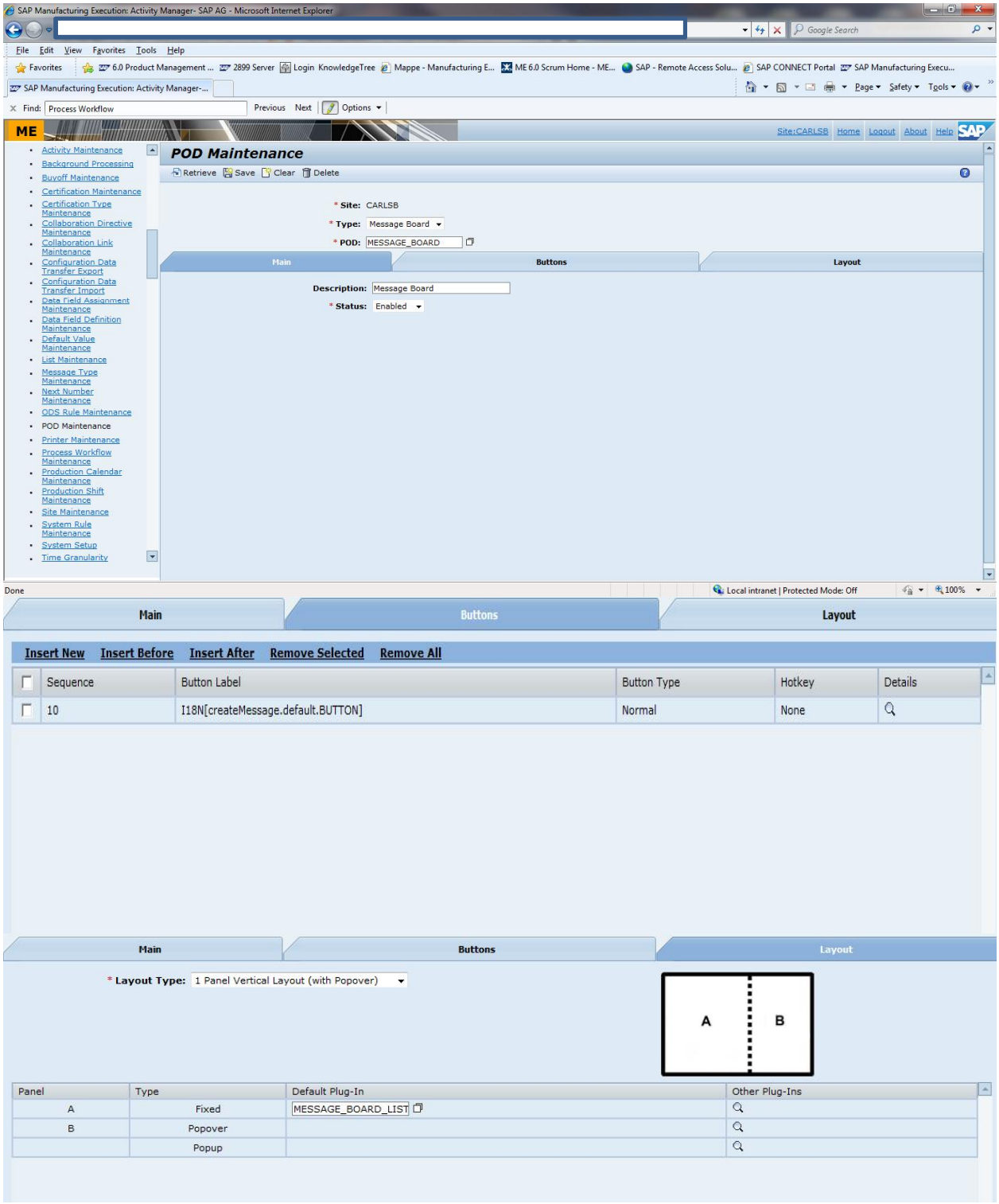
5.2.6.2.3 Best Practices – The Message Types described above have been created specifically for the old "Events" that used to exist in the system. We recommend that if you need the message workflows to behave differently, that you work with an SAP representative to identify the business activities needed, create new ones if necessary, group them into Process Workflow templates and assign them to the desired Message Types (new or existing). Minor updates such as changing Description, Severity, Message Subject, Message Body, POD Notification or User Groups or assigning an E-mail address have no direct effect on the Message processing and can be made as needed.

5.2.6.3 POD Maintenance

5.2.6.3.1 Purpose / Effects

Pod maintenance has been modified in support of the new Message Board functionality. One additional new POD TYPE has been created specifically for the Message Board POD, and a default POD, titled MESSAGE_BOARD, has been defined and configured. The Create Message (CREATE_MES_PLUGIN) has been configured on a Button on the Message Board. Then on the Layout tab the Create Message plug-in has been assigned to open as a Popup. This is how the Create Message plug-in should be configured if it is needed on other PODs like the Operation and Work Center POD. Panel A (Fixed) has been configured to be the Message List. The MESSAGE_BOARD_LIST is essentially the table, with the predefined columns, labels, and Action buttons which you will see in the Message Board view. The MESSAGE_BOARD_LIST can be configured in other POD layouts as well, to be run from another POD such as the Operation and Work Center POD. It can be configured in a fixed panel, popover and popup configuration. You can change the overall layout; however, the Message Board POD has been maximized to display efficiently and effectively for the end user. The Message Board Search and Filter panel is static and is not configurable in any layout or Message Board POD configuration. The RTMD uses a variation of the MESSAGE_BOARD_LIST, which is also static and applicable to that functionality and sorts messages as Critical first, Warning, then Info last and does not offer the filter, or search, panel in this list.

POD Maintenance – Message Board


POD Maintenance
Retrieve Save Clear Delete
* Site: CARLSB
* Type: Message Board
* POD: MESSAGE_BOARD
Main Buttons Layout
Description: Message Board
* Status: Enabled
Insert New Insert Before Insert After Remove Selected Remove All
Sequence Button Label Button Type Hotkey Details
10 I18N[createMessage.default.BUTTON] Normal None
* Layout Type: 1 Panel Vertical Layout (with Popover)
A B
Panel Type Default Plug-In Other Plug-Ins
A Fixed MESSAGE_BOARD_LIST
B Popover
Popup

A Message Board POD with at least the following plug-ins is needed in order to utilize Message Board as a standalone POD:

- Message Board List - MESSAGE_BOARD_LIST
- Create Message Plugin - CREATE_MESS_PLUGIN

5.2.6.3.2 Settings / Example

A default Message Board POD is predefined in ME. It uses the 1 Panel Vertical Layout (with Popover). This may not be optimal for viewing, if you need to set up a new Message Board POD; POD Maintenance provides a lot of flexibility in configuring a POD. See *POD Maintenance* in ME Help.

5.2.6.3.3 Best Practices – The default Message Board POD definition that has proven effective for viewing and processing Messages. We recommend that it be used as a good starting point.

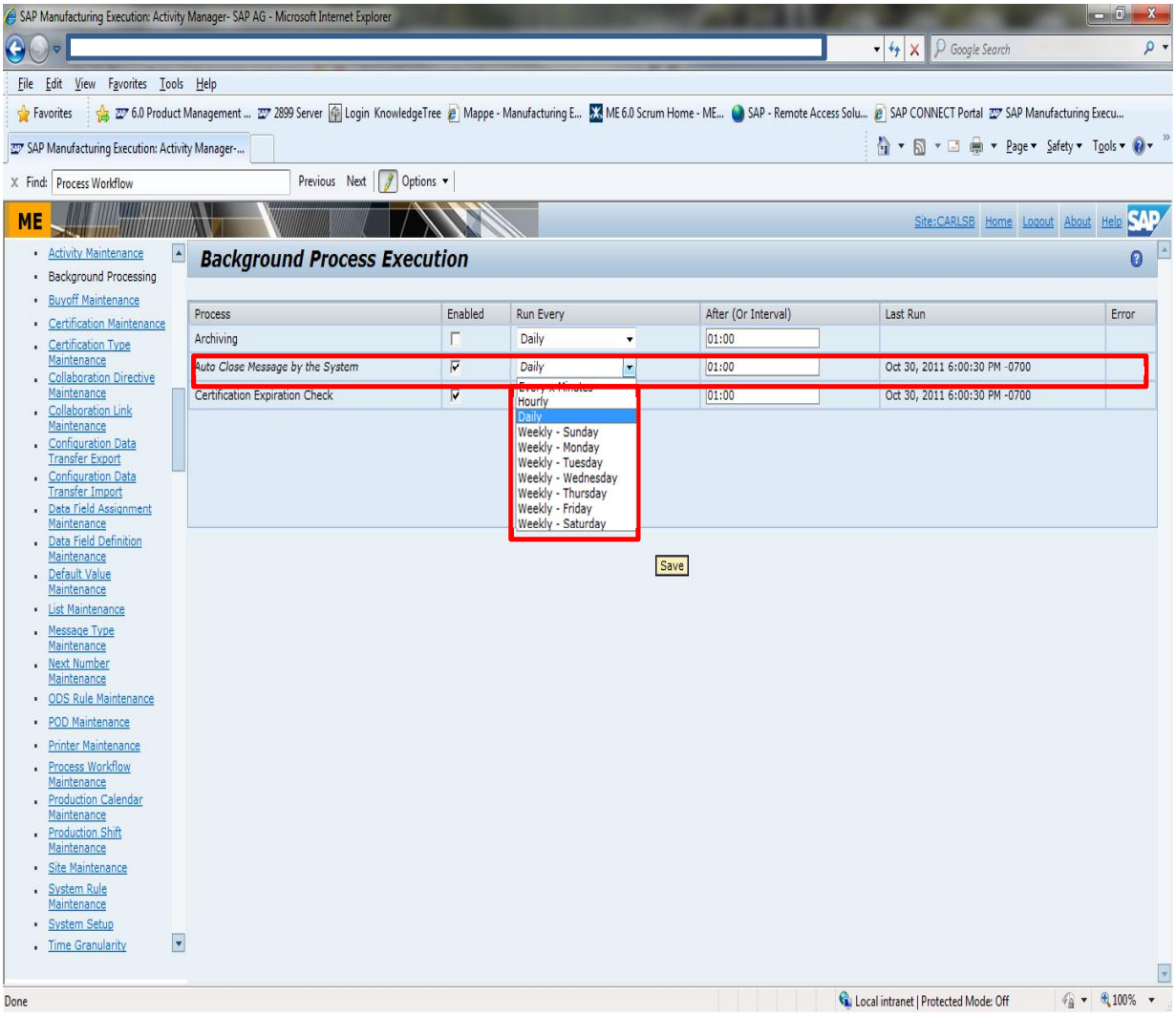
5.2.7 Other Maintenance Activities

5.2.7.1 Background Processing

The process, Auto Close Message by the System, should be configured to allow the system to "close" messages automatically, via a background process. Messages with a Message Type that has "Use Auto Close Interval" checked will be closed automatically. The Auto Close Message by the System activity will run as a background process at the specified intervals to check for and close these messages. This process has three parameters:

- Enabled
- Run Every
- After (or Interval)

Background Processing Activity



5.2.7.1.1 Purpose / Effects

Enabled - Setting this parameter specifies that messages flagged as Use Auto Close Interval are to be closed automatically by the system. This parameter is defaulted to checked.

Run Every – This parameter specifies the frequency of running the background process:

- Every x Minutes
- Hourly
- Daily
- Weekly – Sunday

- Weekly – Monday
- Weekly – Tuesday
- Weekly – Wednesday
- Weekly – Thursday
- Weekly – Friday
- Weekly – Saturday

This parameter is defaulted to Daily.

After (or Interval) – This parameter specifies either the earliest time in the day when the process can run, or the interval (in minutes) between runs. This parameter is an interval if the Run "Every" parameter is set to Every x Minutes. It is not used for Hourly. For the Daily and Weekly settings, it is the earliest time in the day when the process can run. This parameter is defaulted to 1:00.

The default settings ensure that every day after 1:00 the system polls to see if any messages should be closed by the system automatically. If this process is not configured, then messages will not be closed automatically even if they are flagged for auto closure. This process allows messages, which are system generated and do not require manual user intervention (processing) to take place, to be closed automatically. These typically are information messages that are generated by a manufacturing process so the user community is aware, but do not require a user to take any action. Configuring this background process to poll will cause these messages to be automatically closed.

5.2.7.1.2 Settings / Example

All of the following configuration parameters must be set up before the system will automatically close messages.

- Use Auto Close Interval (Message Type Maintenance)
- Number of Days (Message Type Maintenance)
- Auto Close Message by the System - Enabled, Run Every and After (or Interval)

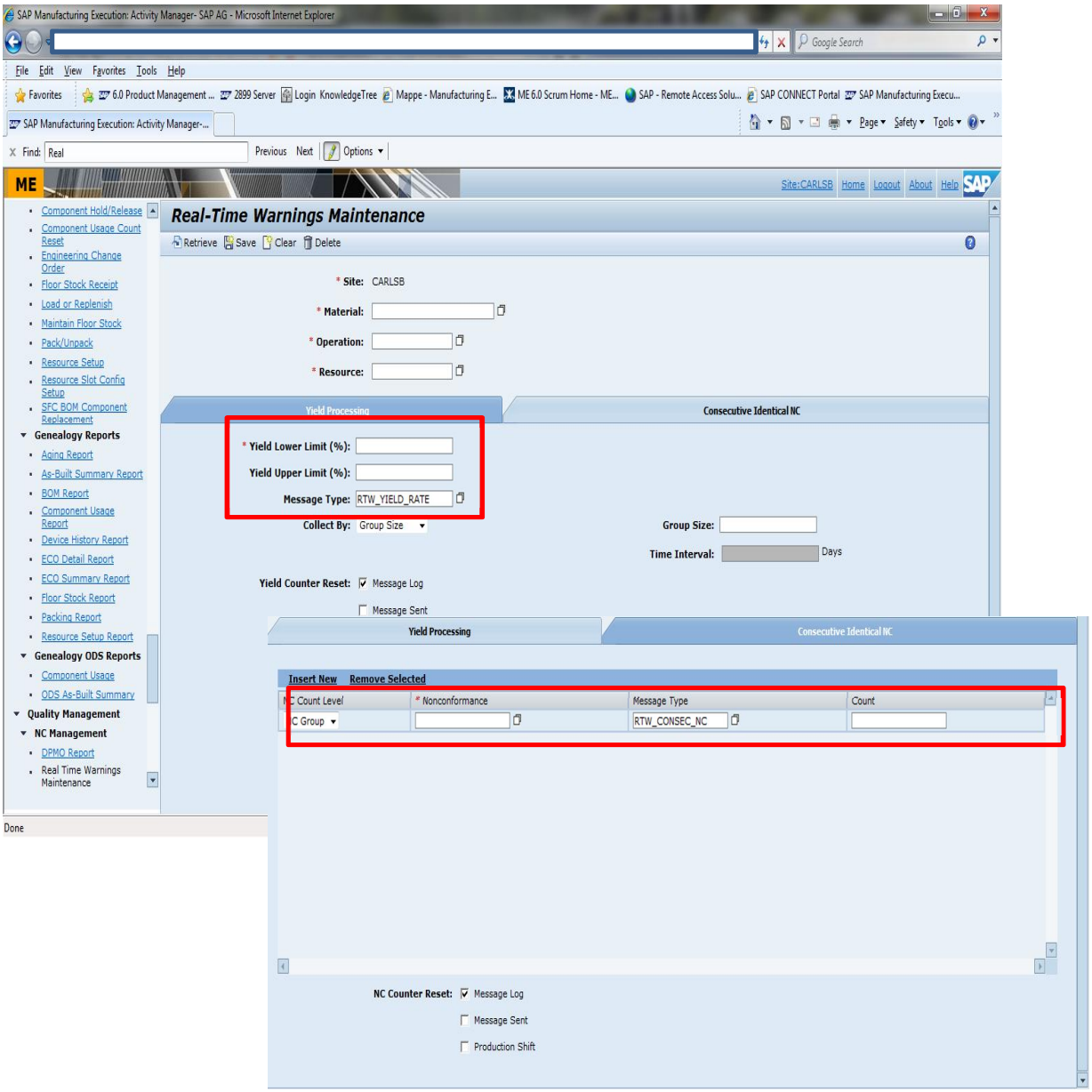
5.2.7.2 Real Time Warnings Maintenance

5.2.7.2.1 Purpose / Effects

This activity has been modified / enhanced to configure Message types of RTW (Yield Processing) and Consec NC (Consecutive Identical NC's). This includes configuring the triggers that will generate the RTW type messages to the Message Board POD, when the

thresholds for the Consec NC and Yield Violation and Yield Warning type Messages have been met.

Real Time Warnings Maintenance



5.2.7.2.2 Settings / Example

For Yield Processing threshold warnings identify the Material, Operation and Resource. On the Yield Processing Tab Identify the Yield Lower Limit attributes and assign a *Message Type*. The message type created for these types of Real Time Warnings for Yield Processing scenarios is RTW_YIELD_RATE.

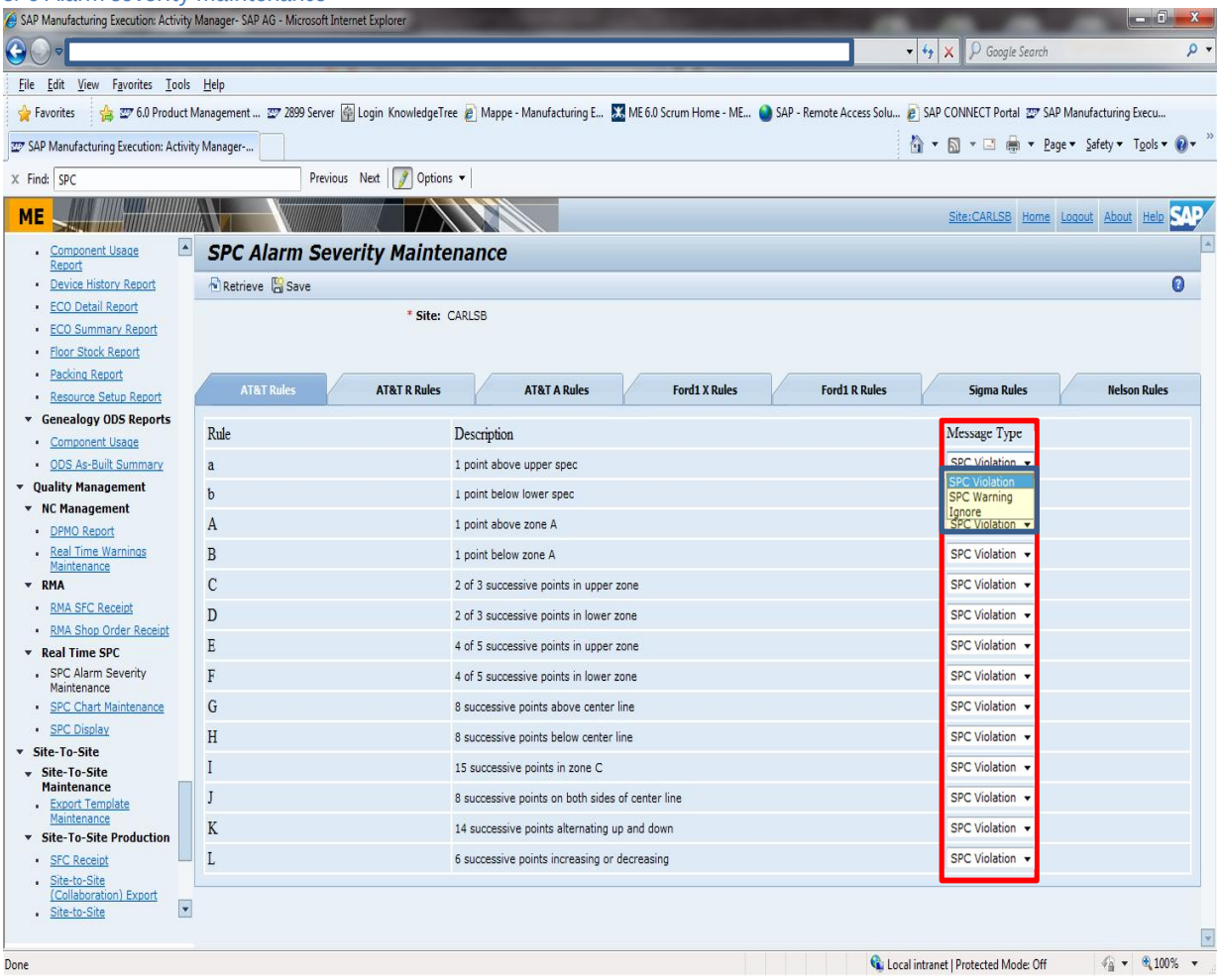
For Consecutive Identical NC threshold warnings identify the NC Count Level (NC Group or NC Code), the Nonconformance type (an NC Group or an NC Code), assign a *Message Type* and identify the Count threshold (0 or >). The message type created for these types of Real Time Warnings for logged Consecutive Identical NC's scenarios is RTW_CONSEC_NC.

5.2.7.3 SPC Alarm Severity Maintenance

5.2.7.3.1 Purpose / Effects

This activity has been modified / enhanced to assign Message types of SPC Violation or SPC Warning to the various SPC rules.

SPC Alarm Severity Maintenance



5.2.7.3.2 Settings / Example

Select the Message Type for each rule on the SPC Rules tab that will be used. Valid selections include SPC Violation, SPC Warning or Ignore. SPC Violation will send messages of the Message type SPC_ALARM_VIOLATION to the Message Board. SPC Warning will send messages of the Message type SPC_ALARM_WARNING to the Message Board. IGNORE will not send a message to the Message Board. Only when

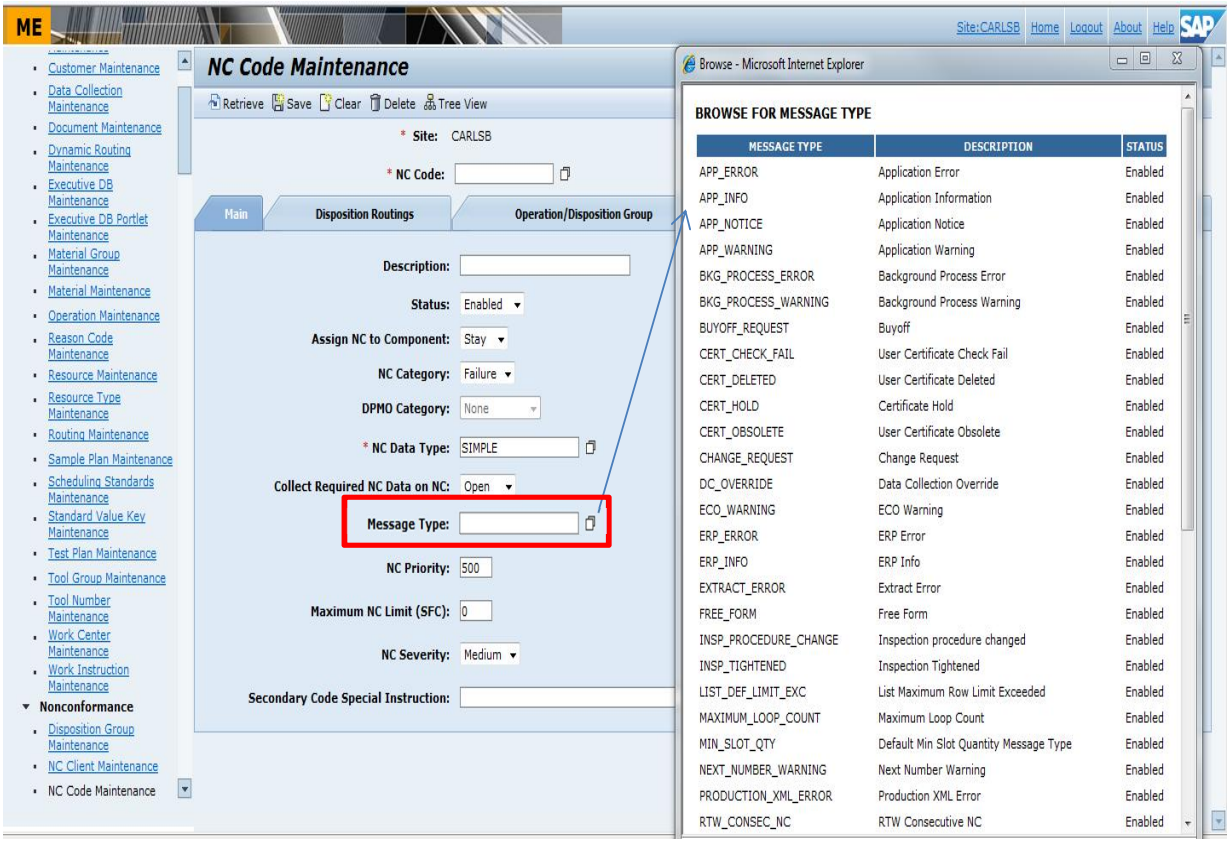
a rule has been met during SPC processing will the specified message be sent to the Message Board.

5.2.7.4 NC Code Maintenance

5.2.7.4.1 Purpose / Effects

Each NC Code MAY have an associated Message Type assigned. A message of the assigned Message Type will be generated to the Message Board if NC scenarios require a message to be sent when an NC Code is logged on an SFC. If you need to define a new NC Code, see NC Code Maintenance in ME Help.

NC Code Maintenance



5.2.7.4.2 Settings / Example

This is used in parallel with the Real Time Warnings settings for Consecutive Identical NC's. For Consecutive Identical NC threshold warnings, specify the Maximum NC Limit (0 or >) and assign a Message Type. The message type created for these types of Real Time Warnings for logged Consecutive Identical NC scenarios is RTW_CONSEC_NC.

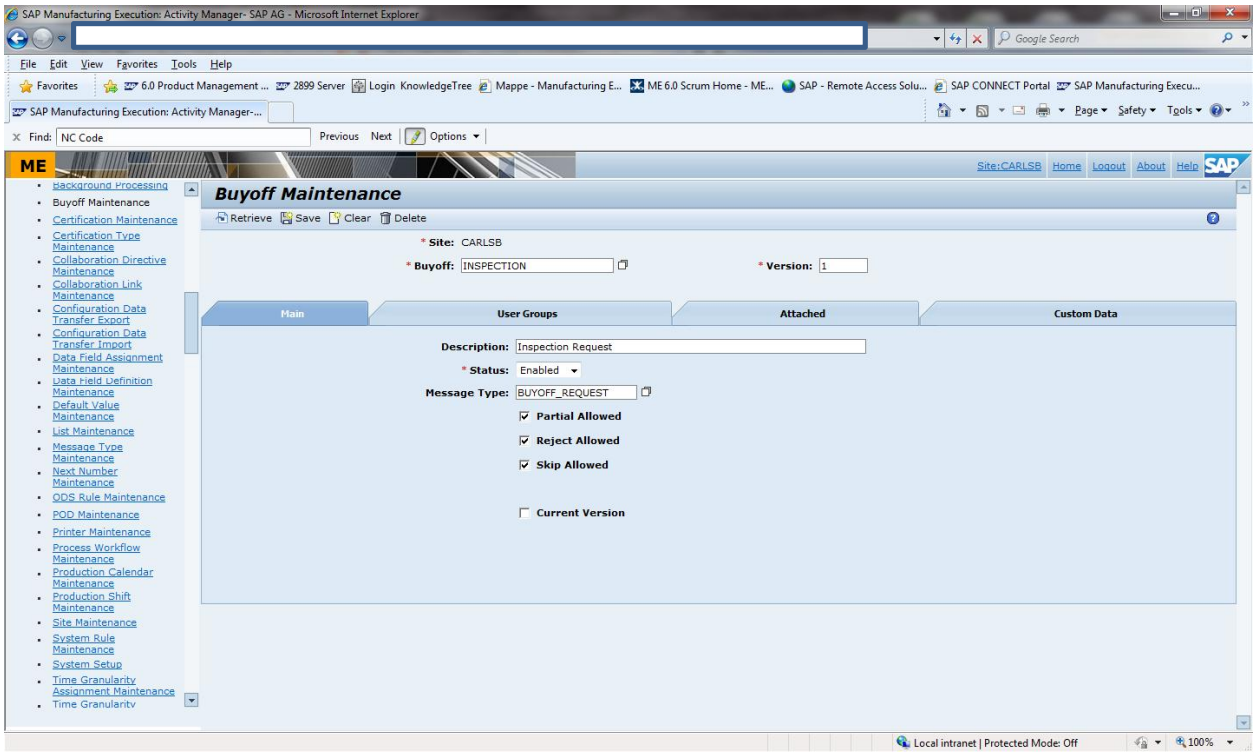
5.2.7.5 Buyoff Maintenance

5.2.7.5.1 Purpose / Effects

Buyoffs that require a Message to be generated to the Message Board now support assignment of a Message type. This is particularly appropriate in the case of the

Inspection type Buyoffs. This type of Buyoff will generally require an Inspector to accept or reject an Operator's Shop floor work (rework or planned work). When an SFC has been started and completed and goes to a "Complete Pending" state due to an open Buyoff, this triggers the BUYOFF_WF type message to be sent to the Message Board. From this message type the Inspector will be notified of the buyoff request to inspect work and they can then either Accept or Reject the buyoff from this message.

Buyoff Maintenance



5.2.7.5.2 Settings / Example

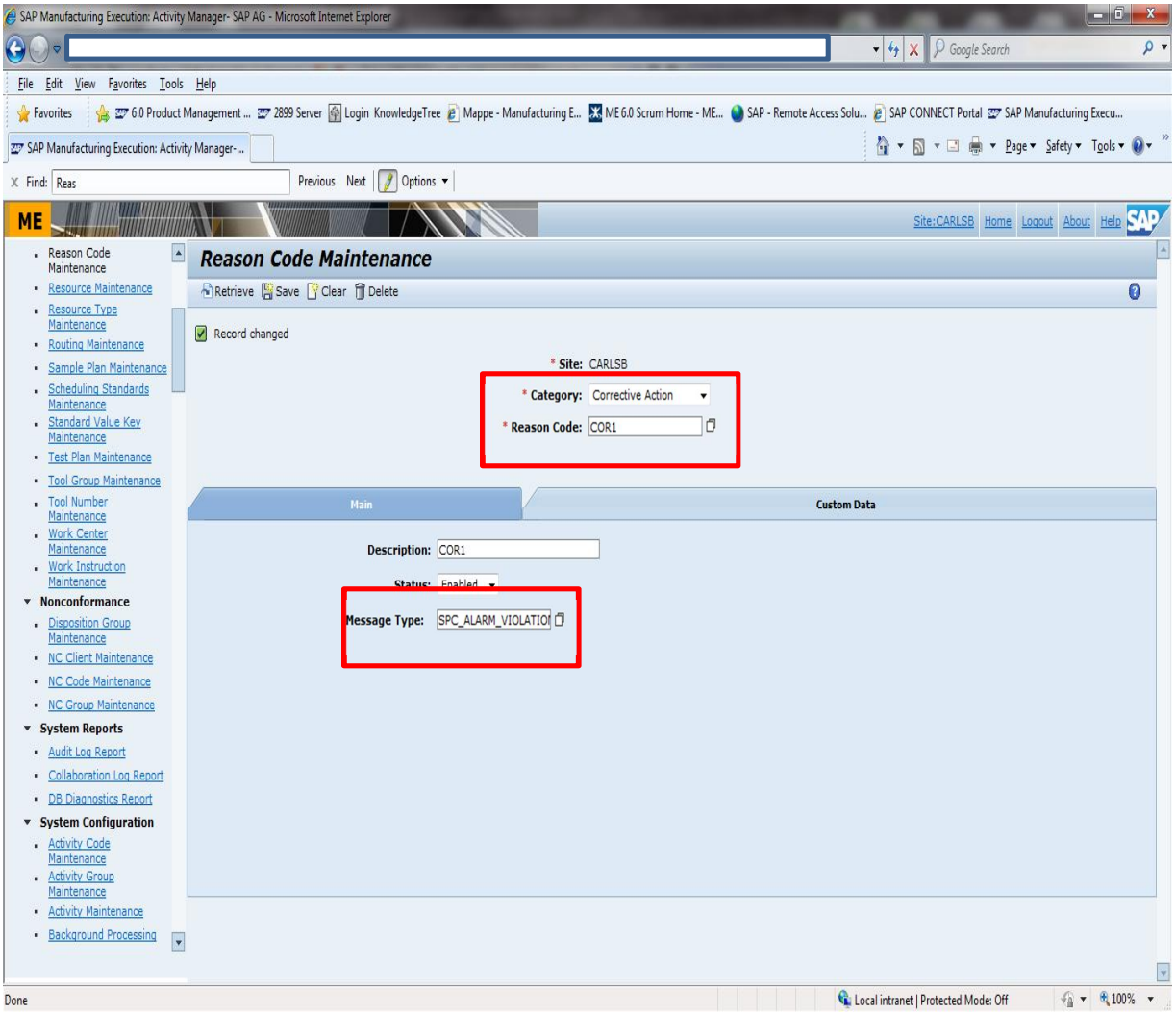
A Buyoff of INSPECTION should have the BUYOFF_WF Message Type assigned on the Main Tab and attached to an Operation on the Attached Tab. This is the only way the Buyoff Request message will be generated to the Message Board; if nothing is assigned, no message is generated.

5.2.7.6 Reason Code Maintenance

5.2.7.6.1 Purpose / Effects

All CATEGORY types (with the exception of ECO Change Request) allow for the assignment of a Message type to each Reason Code. A message of the message type is triggered when a Reason Code is logged during the production activity. If you need to define a new Reason Code, see Reason Code Maintenance in ME Help.

Reason Code Maintenance



5.2.7.6.2 Settings / Example

Status: Controls whether the reason code is available for use on the shop floor.

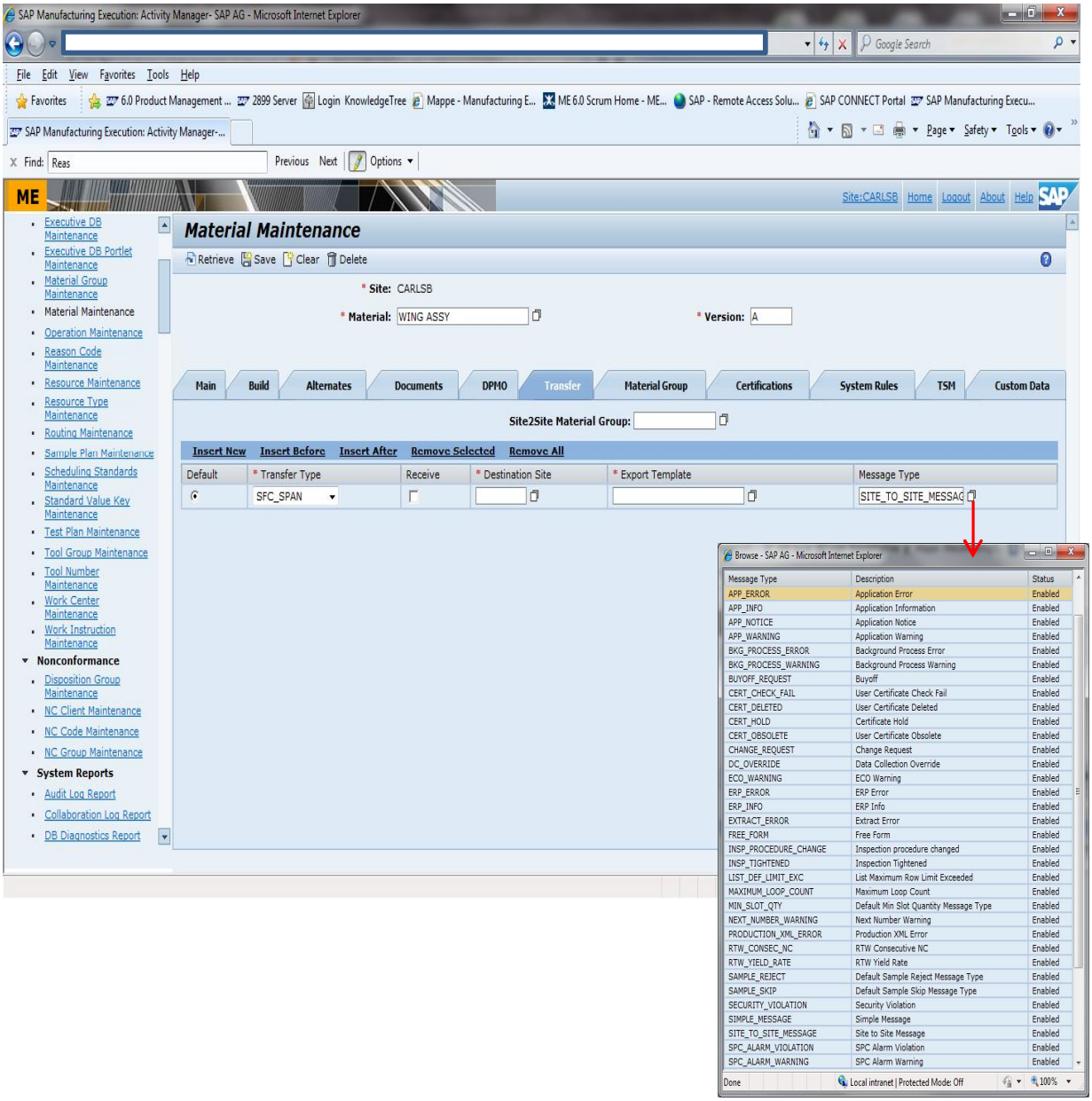
Example for the Corrective Actions category:
Assign a message type that has a LOG_CODES Process Workflow activity assigned. See also *Reason Code in* ME Help.

5.2.7.7 Material Maintenance

5.2.7.7.1 Purpose / Effects

Used in Site-to-Site transfer functionality. If you need to define a new Material, see Material Maintenance in ME Help.

Material Maintenance


SAP Manufacturing Execution: Activity Manager- SAP AG - Microsoft Internet Explorer
Material Maintenance
Retrieve Save Clear Delete
* Site: CARLSB
* Material: WING ASSY
* Version: A
Main Build Alternates Documents DPMO Transfer Material Group Certifications System Rules TSM Custom Data
Site2Site Material Group:
Insert New Insert Before Insert After Remove Selected Remove All
Default * Transfer Type Receive * Destination Site * Export Template Message Type
SFC_SPAN
SITE_TO_SITE_MESSAG
Browse - SAP AG - Microsoft Internet Explorer
Message Type Description Status
APP_ERROR Application Error Enabled
APP_INFO Application Information Enabled
APP_NOTICE Application Notice Enabled
APP_WARNING Application Warning Enabled
BKG_PROCESS_ERROR Background Process Error Enabled
BKG_PROCESS_WARNING Background Process Warning Enabled
BUYOFF_REQUEST Buyoff Enabled
CERT_CHECK_FAIL User Certificate Check Fail Enabled
CERT_DELETED User Certificate Deleted Enabled
CERT_HOLD Certificate Hold Enabled
CERT_OBSOLETE User Certificate Obsolete Enabled
CHANGE_REQUEST Change Request Enabled
DC_OVERRIDE Data Collection Override Enabled
ECO_WARNING ECO Warning Enabled
ERP_ERROR ERP Error Enabled
ERP_INFO ERP Info Enabled
EXTRACT_ERROR Extract Error Enabled
FREE_FORM Free Form Enabled
INSP_PROCEDURE_CHANGE Inspection procedure changed Enabled
INSP_TIGHTENED Inspection Tightened Enabled
LIST_DEF_LIMIT_EXC List Maximum Row Limit Exceeded Enabled
MAXIMUM_LOOP_COUNT Maximum Loop Count Enabled
MIN_SLOT_QTY Default Min Slot Quantity Message Type Enabled
NEXT_NUMBER_WARNING Next Number Warning Enabled
PRODUCTION_XML_ERROR Production XML Error Enabled
RTW_CONSEC_NC RTW Consecutive NC Enabled
RTW_YIELD_RATE RTW Yield Rate Enabled
SAMPLE_REJECT Default Sample Reject Message Type Enabled
SAMPLE_SKIP Default Sample Skip Message Type Enabled
SECURITY_VIOLATION Security Violation Enabled
SIMPLE_MESSAGE Simple Message Enabled
SITE_TO_SITE_MESSAGE Site to Site Message Enabled
SPC_ALARM_VIOLATION SPC Alarm Violation Enabled
SPC_ALARM_WARNING SPC Alarm Warning Enabled

5.2.7.7.2 Settings / Example

During definition of Material it may be necessary to identify Site to Site transfer criterion on the Transfer tab. A Message Type can be assigned in the Message Type column in the table on the Transfer tab. The Message Type SITE_TO_SITE_MESSAGE has been created to support sending a message out to multiple User Groups to inform them that a transfer of Material data has occurred between Sites.

5.2.7.8 User Group Maintenance

5.2.7.8.1 Purpose / Effects

Allows for the assignment of permissions to specific User Groups. If you need to define a new User Group, see User Group Maintenance in ME Help.

5.2.7.8.2 Settings / Example

Message Board POD should be assigned (Execute check box checked) to User Groups so they can use the Message Board functions.

5.3 Setup via POD Plug-ins

5.3.1 Message Board POD

5.3.1.1 Purpose / Effects

Provides the capability to create, modify or update the Message Board POD.

5.3.1.2 Settings / Example

Buttons Table - This table represents the data on the Buttons tab.

Button Label	Button Type	Activity
I18N[createMessage.default.BUTTON]	Normal	CREATE_MESS_PLUGIN

Layout Table – This table represents the data on the Layouts tab:

Panel	Type	Default Plug-in	Other Plug-ins
A	Fixed	MESSAGE_BOARD_LIST	
B	Popover		
	Popup		CREATE_MESS_PLUGIN

6 Usage Scenario Examples

6.1 Buyoff Request Scenario

6.1.1 Purpose / Goal

This scenario provides an example of when a BUYOFF_REQUEST Message is generated to the message Board.

For this scenario the following preconditions apply:

- Inspection Buyoffs exist and are attached to the Assembly Operation (In Buyoff Maintenance)
- MANMAT1 materials exist and SFC's are generated to the Operation POD and are being processed at Assembly Operation
- User has a User Group assigned that will allow for Accepting Buyoff's

6.1.2 Scenario Specific Settings

All other Configurations defined above have been set up.

6.1.3 Scenario Steps

The following are examples of the steps that a user might perform in SAP ME in order to accomplish this scenario.

Buyoff Request message

1. Open the default Operation POD (POD – Operation)
2. Select operation Assembly
3. Select resource Default
4. Select the browse for SFC numbers
5. Select SFC number MANMAT1-0001
6. Select the Start button to process MANMAT1-0001
7. Operation status goes to Active
8. Select the Complete button
9. Operation status goes to Complete Pending due to Open Buyoff's that exist on the Operation
10. At the same time the system generates the Buyoff Request message to the Message Board
11. Launch the Message Board and find the BUYOFF_REQUEST type message and select it in the list
12. Select the Claim button on the bottom of the Message Board
13. Claim Comments dialog is displayed
14. Enter Claim comments and select Claim
15. Message Status goes to Claimed
16. Select the Details icon to display the details view
17. Details dialog is opened and the user will see the meta data associated to the Operation where the Buyoff exists, and on the bottom of the dialog will be the Accept and Reject buttons.

Accept the Buyoff on the details dialog

18. Select the Accept button
19. The comment "Accept Buyoff" is logged against the Message, the dialog refreshes and shows a new row in the Message Log details with the comments that were entered, and the status shows Closed
20. Message status goes to closed

21. At the Same time the system sends the accept request back to the Operation and SFC and completes the SFC at the Operation and the status of the SFC goes to Complete (from Complete Pending). All buyoffs are completed.
    OR Reject the Buyoff on the details dialog
22. Select the Reject button
23. The simplified Log NC Reject dialog is displayed with the default NC Code of COMMENT.
24. Enter Comments and select Reject
25. Comments are logged against the Message, the dialog refreshes and shows a new row in the Message Log details with the comments that were entered, and the status of the message shows Closed
26. Message status goes to closed
27. At the Same time the system sends the Reject request back to the Operation and SFC and reopens the buyoffs for the SFC at the Operation and the status of the SFC goes to Active (R) (from Complete Pending). All completed buyoffs are re-opened.

6.1.4 Scenario Best Practices

This is just one of the flows that may be accomplished, and one of the more complex of the system, where an either-or scenario could take place.

7 Links to Additional Information

- Message Board POD – Link to Message Board POD information in SAP ME Help
- Messages – Link to Messages information in SAP ME Help

8 Other Reference Material

N/A

9 Overview of Changes

Event Maintenance has essentially been replaced by Message Type Maintenance; therefore this activity has been removed. Most of the Event processing functionality has been converted and translated into the Message Board.

Just about all of the configurable Event Parameters that used to exist have been converted to be useable in Message Type Maintenance. This includes:

- Clear has been translated to COMPLETEING or CLOSING a Message through the Message Board
- The ability to require Cause Code, Resolution and Corrective Codes for clearing (these have been translated to the Log Codes activity and can be applied to any message type that requires these attributes to close or clear a Message)

- The RTMD functionality has replaced the Event method of displaying Real Time Warning or Violation Messages.
- Event Viewer has been replaced by the Message Board POD as the mechanism to view messages; therefore these activities have been removed.
- Real Time Warnings Maintenance has been modified to support the new Message Board functionality for RTMD and the icon on the POD. In this activity, the Assign a Message Type has been added in place of the previous "Event type".
- SPC Alarm Severity Maintenance has been modified to Change the "Alarm Type" column to Message Type so now specific Message Types can be assigned, the values are still SPC Violation, and SPC Warning or Ignore.
- System Rule Maintenance has been modified to remove the Rule MESSAGES_VALIDITY_PERIOD, as this is now handled through processing of a Message in Message Board and by the additional settings available to Message Types for Auto Close Interval and Auto Close on Process Workflow Completion.
- System Setup has been modified to remove the property rted.number.of.messages, as it is no longer needed. The property rted.polling.period.seconds has been enhanced to now apply to the Message Board RTMD. It designates how often the system should poll to find Messages that are flagged for "POD Notification".
- Background Processing has been modified to include the background process Auto Close Message by the System. This process will automatically close Messages that have the Auto Close Interval setting checked and the time setting defined Message Type Maintenance. This Background process can be configured to run on and interval specified in Minutes, Hourly, Daily or Weekly on a designated day.
- POD Maintenance has been redesigned. The change related to Message Board is that a new Type of POD, titled Message Board, has been added. A default configuration of this POD has been defined and is the supported version of the standalone Message Board POD. This configuration should not be modified.
- Activity Maintenance has been enhanced with two new activity Types specifically for Process Workflow processing. The two new Types are Process Workflow Manual Activity, and Process Workflow Automatic Activity. These two new types help to define whether or not an activity requires a user's manual action. This includes: clicking a button, entering required data to be captured on the message, or performing some task to complete this step on a Process Workflow associated with a message type.

  Take for instance, ACCEPT_BUYOFF; this is a newly converted activity used in the processing of BUYOFF_REQUEST type messages. These messages are generated when an Operation has been COMPLETED and its status is Complete Pending due to Open Buyoffs that need to be completed. ACCEPT_BUYOFF is a Process Workflow Manual Activity because at this point in the message processing, the message must be Accepted or Rejected. This requires a user to click an Accept or Reject Button on the Message Details to Complete the Open Buyoff and allow the Message to be processed to a Closed state. What this does is; acknowledges that a message has been

reviewed, and transacted against. So in a case where inspectors have the task of accepting or rejecting buyoffs, they can perform this task directly from the Message board, by monitoring their queue and processing these requests as they come through.
LOG_CODES is another example of a Process Workflow activity. This activity is used for processing Message types of SPC and RTW where originally, the process was to require or optionally require a User to enter a Cause Code, Corrective Action Code or Resolution text to clear or close the message. This new activity has been maximized to include Rules for these codes to be entered and whether they are required or not. This activity is a Manual activity type, which means when it is in the workflow of a message type and this is the active step, the user will be required to click a button called Log Codes. This displays the data entry dialog, where the user can enter the required information and, when done, complete the step and move on to the next step in the processing of the message, if there is one. This is an example of how the previous Event activities have been translated and modified to be applied to Message Board processing.

The following is a list of some of the activities affected:

9.1 Replaced Activities

- CONSEC_NC_HOLD_REL – Replaced with CONSEC_NC_OP_HOLD and CONSEC_NC_RES_HOLD
- YIELD_HOLD_REL – Replaced with YIELD_RES_HOLD and YIELD_OP_HOLD
- SPC_WARN_HOLD_REL – Replaced with SPC_WARN_OP_HOLD and SPC_WARN_RES_HOLD
- SPC_VIOL_HOLD_REL – Replaced with SPC_VIOL_OP_HOLD and SPC_VIOL_RES_HOLD

9.2 Removed or Enhanced Activities

- SY070 - Event Maintenance
  Removed - Activity No longer needed, Message Type Maintenance replaces this.

- SY541 - Event Viewer Plug-in
  Removed - Activity No longer needed, Message Board replaces this.

- SY540 - Event Viewer
  Removed - Activity No longer needed, Message Board replaces this

- RT010 - Real Time Warnings Maintenance
- Activity Modified/enhanced to assign Message types of RTW (Yield Processing) and Consec NC (Consecutive Identical NC's) to trigger these types of messages to the Message Board when the thresholds have been met.SP020 - SPC Alarm Severity Maintenance
  Activity Modified/enhanced to assign Message types of SPC Violation or SPC Warning to trigger these types of messages to the Message Board when the thresholds have been met.

- SY100 - System Rule - MESSAGES_VALIDITY_PERIOD
  Removed – no longer needed, Message Board handles message validity

- SS100 -System Setup

Removed -rted.number.of.messages no longer needed, Message Board and RTMD Message list handles this.

- SS100 - System Setup
  Enhanced - rted.polling.period.seconds to support RTMD and the polling period settings for updating the List of RTMD messages when new ones have been generated.SYS999 - Background Processing
- Auto Close Message by the System Activity added to run background process at certain increments to check for and close messages types that have Auto Close Interval set.
- EN090 – POD Maintenance
  Enhanced – New POD TYPE of Message Board and Default MESSAGE_BOARD pod created and pre-configured.

9.3 Settings / Example

The new Process Workflow activities have been created, optimized and associated to the appropriate Process Workflow Templates and their respective Message Types.

9.4 Best Practices

We recommend that you work with an SAP representative if any change to the Process Workflow Activities, Process Workflows, and Message Types or Message Board configuration does not suit your needs.

The process of managing and maintaining the overall Message Board functionality includes:

- Start at *Activity Maintenance* and create or modify existing *Process Workflow Activities* and other Maintenance activities
- Proceed to Process Workflow Maintenance and create or modify existing Process Workflow templates by adding Activity types defined for workflow (Manual or Automatic) steps
- Go to *Message Type Maintenance* and assign the Process Workflow Templates to the appropriate Message type
- Go to *POD Maintenance* and create or modify the existing Message Board Pod as desired and make all other POD configurations for RTMD etc.